INTERNATIONAL RELATIONS AND SECURITY

1. USA withdrawal from Afghanistan -
Trump rules out “zero option”

Why in news?

Trump spoke regarding the ongoing peace talks with the Taliban in Afghanistan. Trump said that the US is negotiating with the Afghan government and with the Taliban about withdrawal of troops.

President Trump has indicated that there will not be complete withdrawal of American forces from Afghanistan, stating the US have to “have a presence” in the war-torn country.

U.S. President Trump named India as one of the countries that ought to be fighting the Islamic State (IS) in Afghanistan. He also appeared to suggest that Russia, Iran, Turkey, Afghanistan and Pakistan were countries that should be fighting the IS in Afghanistan. And that America will not be the only one.

Zero Option:
The “Zero Option” was the name given to an American proposal for the withdrawal of all Soviet and United States intermediate-range nuclear missiles from Europe. This term was subsequently expanded to describe the vision of eliminating all nuclear weapons everywhere.

India –Afghanistan relations:
A need for reviewing relations has become essential following US President Trump’s unilateral announcement that he is pulling US troops out of Afghanistan.

Historical ties:
Afghan is considered as ‘Graveyard of empires’. Relations between the people of Afghanistan and India can be traced back to the Sindhu Saraswati civilization. From the 10th century to the mid 18th century India faced invasions from rulers based on this regions.
Modern day relations:
1) Strategic interests are that India benefits from having Afghanistan as an ally as it has the capacity to monitor Pakistan. India’s interests are also on being a regional power.
2) Economic interests are that it provides a market and India has huge investments in this area.
3) Security issues concern the Golden Crescent region which is the root cause of drug abuse prevalent in Indian states like Punjab.
4) In 1950, Afghanistan and India signed a “Friendship Treaty.” Since 2001, India has relied upon development projects and other forms of humanitarian assistance.

About Taliban:
The Taliban emerged in the early 1990s in northern Pakistan following the withdrawal of Soviet troops from Afghanistan.
Afghan Peace process is a set of negotiations involving several parties such as Taliban the afghan government, USA ad Russia regarding withdrawal of troops and bringing peace.

2. Trade War

Context:
The US and China have been slugging it out since Trump slapped heavy tariffs on imported steel and aluminum items from China in March last year, and China responded by imposing tit-for-tat tariffs on billions of dollars’ worth of American imports.

How has India been affected by this global trade war?
The stock market has had a short term impact, but during the long run the slowdown of us economy will have an huge impact on emerging economies such as India. But we are also among those who stand to benefit when these giants are at war. This had a huge impact on Indian rupees a the value fell considerable.

Impact on the world economy:
The IMF has lowered its forecast for global growth this year and next. It said that a full-blown trade war between the US and China would put a significant dent in economic recovery.
Since us markets are closed to china these ids a huge chance of the product flooding the Indian market, although at a cheaper rate the domestic producers stand to suffer.
The Indian producers have a chance to fill the gap of Chinese products in USA.
What remains to be seen is that how the global trade proceed further: The rise of protectionist policies from developed nations have brought questions regarding the relevance of the world trade organisation.

3. Indian Prime Minister’s visit to Russia: Eastern Economic Forum

Context:
PM Modi is scheduled to visit Russia in September 2019. He was invited by Russian President Putin as a chief guest for the 5th edition of Eastern Economic Forum. Earlier this month, Commerce and Industry Minister lead a delegation to Vladivostok to explore the investment opportunities in Russia’s Far East Region.

Background:
India was the first country to establish a resident consulate in Vladivostok in 1992.

About the forum:
Eastern Economic Forum is an international forum held every year in Vladivostok, Russia. It was set up in 2015, to support the economic development of Russia’s Far East region and to expand international cooperation in the Asia-Pacific region. Russia’s Far East offers an important area for use of India’s skilled man power to develop the region that is vast and under populated.

India-Russia relations through time

In 1971 the Treaty of Peace, Friendship and Cooperation was signed between the Republic of India and the USSR, while it was reshaped in 1993 as the Treaty of Friendship and Cooperation between the Republic of India and the Russian Federation, after the disintegration of the USSR in 1991. The was a Declaration on Strategic Partnership between the Republic of India and the Russian Federation in 2000 and another Joint Statement was released in 20110 elevating the Partnership to a Special and Privileged Strategic Partnership. The Sochi Summit (2018) manifested the role of interaction and cooperation between India and Russia in building a multi-polar world order. Other areas of cooperation between the countries include:

Economy: In order to promote bilateral trade in national currencies the two-way investment will be increased to USD 30 billion by 2025.
Infrastructure: Both the countries called for the development of the International North-South Transport Corridor (INSTC).

Science and Technology: The 10th Indian-Russian Working Group on Science and Technology, which is jointly supervised by the Department of Science and Technology of India and the Ministry of Science and Higher Education of the Russian Federation, was successfully conducted in February 2018.

Military Co-operation: Both sides commended the successful completion of the first ever Tri-Services Exercise INDRA in 2017. India also import various military technology from Russia, with the S-400 Long Range Surface to Air Missile System being the most recent ones.

Energy and minerals: Russia ranks first in the world for oil and natural gas production, exports of steel, primary aluminium and nitrogen fertilizers. Russia is also the largest in terms of reserves of tin, zinc, titanium, niobium, nickel, iron ore, drinking water, natural gas, wood, diamonds and silver.

International relations: Both countries will continue to enhance interaction and coordination of efforts in the United Nations, the BRICS, the SCO, G20, RIC, East Asia Summits and other multilateral organisations.

Way forward:
India’s existing engagement with the region is limited to isolated pockets. Thus, connectivity has to be simplified, and made affordable and time efficient in order to bolster the trade ties. It will not only provide access to the resource rich, unexplored Far East but will also strengthen India’s geo-political stature.

4. India - France Relation: Latest Development

Context:
The Prime Minister of India visited France for an official visit at the invitation of the President of the French Republic, for a bilateral summit on 22nd and 23rd August 2019 in Paris and to participate in the G7 summit, on 26th August 2019, in Biarritz under French presidency of the G7.

Indo – France Relations Background:
1) France has always been sympathetic to similar Indian claims based on its ancient civilisation.

2) France bet on India’s strategic, diplomatic and economic emergence, and steadfastly supported India’s requests in several strategic matters: a permanent seat at the United Nations Security Council, better participation in the decisions taken at international fora (such as the expanded G8 and G20), access to civil nuclear cooperation.

3) Defence cooperation with France began in the 1950s when India acquired the Ouragan aircraft and continued with the Mystères, Jaguar (Anglo-French), Mirage 2000.

4) Both countries started joint naval exercises ‘Varuna’ in 1983.

5) France is the first country with which we initiated a Strategic Dialogue after our 1998 nuclear tests when France refused to impose bilateral sanctions on us and displayed a far greater understanding of India’s security compulsions compared to other countries.

6) France helped India set up the Sriharikota launch site and assisted in engine development and hosting of payloads.

7) After the Cold War, France decided that its preferred partner in the Indian Ocean Region would be India. The relationship progressed through many landmark agreements like Strategic Partnership agreement 1998 and Civil Nuclear agreement 2008.

8) It was the first P-5 country to support India’s claim for a permanent seat in an expanded and reformed UN Security Council.

9) France supports India’s membership of Multilateral Export Control regimes- NSG and MTCR. Its support was vital in India’s admission to MTCR in 2016.

**Importance of France to India:**

1) France and India have a very long history of bilateral cooperation in defence, security, space and high technology.

2) France is 9th largest foreign investor in India.

3) Indian Ocean region will be very important in future peace and development and both the countries will release the Indian Ocean cooperation Joint Strategic Vision.

4) India and France are working together to implement the Paris Agreement on Climate Change.

**India – France area of cooperation:**

1) **Defence:**
   a) The new commitment to go beyond the buyer-seller relationship in the field of weapons procurement.
   b) Synergies between India’s large defense market and the French strengths in armament production.
   c) The signing of Agreement regarding the Provision of Reciprocal Logistics Support.
d) First Rafale jet will reach India in September.

2) Political cooperation :
   a) It began with French support for India in limiting international sanctions on Delhi after its 1998 nuclear tests. Today, France has emerged as India’s most reliable partner on issues relating to terrorism and Kashmir.

3) Regional Cooperation:
   a) To intensify maritime and naval cooperation in the Indian Ocean and more broadly the Indo-Pacific.
   b) There is a sweeping and ambitious ocean agenda awaiting the two countries — from maritime governance to oceanographic research and from interoperability between their armed forces to capacity building in the littoral.

4) Bilateral trade and Economic relations :
   a) The India-France Administrative Economic and Trade Committee (AETC) provides an appropriate framework to assess and find ways to further promote bilateral trade and investment as well as to speed up the resolution of market access issues to the benefit of economic operators.

5) Global agendas-
   a) Climate change, biodiversity, renewable energy, terrorism, cyber security and digital technology, etc :
   b) There have been joint efforts to limit climate change and develop the Solar Alliance.
   c) Both countries have agreed on a road map on cyber security and digital technology.

Way Forward :
France, which had sought strategic autonomy within the framework of its alliance with the US, and India, which has valued independent foreign policy, are natural partners in building the new coalitions for an uncertain era.
France also opens the pathway for deeper engagement with Europe on global issues, especially after uncertainty in the region due to BREXIT.
The new partnerships with France, Germany and other like-minded countries like Japan would hopefully turn out to be far more consequential for India’s influence on the global stage.

5. Pakistan added to FATF’s Blacklist :

Context:
The Asia – Pacific Group (APG) of the global terror financing and money laundering watchdog Financial Action Task Force (FATF) put Pakistan in the Enhanced Expedited Follow Up list for failing to comply with commitment.

At its meeting in Canberra, where discussions were held for over seven hours spread over 2 days, the APG (Asia Pacific Group) found Pakistan non-compliant on 32 of the 40 ‘compliance parameters’ of terror financing and money laundering. Pakistan also had failed 10 out of the 11 ‘effectiveness parameters’.

**FATF and APG:**
The FATF is an intergovernmental body that is now in its 30th year, working to “set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financing system”.

The FATF holds 3 plenary meetings in the course of each of its 12 month rotating presidencies.

The last plenary was held on 19th – 21st June in Orlando, US; the next one is scheduled for Paris on 13th – 18th October.

Pakistan has been under the FATF’s scanner since June 2018, when it was put on the grey list for terror financing and money laundering risks, after an assessment of its financial system and law enforcement mechanisms.

FATF and its partners such as the Asia Pacific Group (APG) review Pakistan’s processes, systems, and weaknesses on the basis of a standard matrix for anti-money laundering (AML) and combating the financing of terrorism (CFT) regime.

**What Pakistan agreed to?**
In June 2018, Pakistan gave a high-level political commitment to work with the FATF and APG to strengthen its AML/CFT regime, and to address its strategic counter-terrorism financing-related deficiencies.

Pakistan and the FATF then agreed on the monitoring of 27 indicators under a 10-point action plan, with specific deadlines.

The understanding was that the successful implementation of the action plan, and its physical verification by the APG, would lead the FATF to move Pakistan out of the grey list. However, failure to comply by Pakistan could result in its blacklisting by September 2019.

It would appear that Pakistan has now failed a key test at the APG. There is a distinct possibility, therefore, that a formal announcement of Pakistan’s blacklisting will be made at the FATF’s Paris Plenary in October.

**Increasing heat on Pakistan:**
At a meeting with the Joint Group of the APG in Guangzhou, China, in May, Pakistan had presented its progress on the 27 indicators. The Joint Group had informed Islamabad that its compliance on 18 of the 27 indicators was unsatisfactory, and asked it to do more to demonstrate strict action against eight terrorist groups, and in combating money laundering

**India vs Pakistan at FATF:**
India is a voting member of both the FATF and the APG, and co-chair of the Joint Group, where it is represented by the Director General of India’s Financial Intelligence Unit (FIU). Pakistan had asked for India’s removal from the group, citing bias and motivated action, but that demand was rejected.

India was not part of the group that had moved the resolution to grey list Pakistan last year in Paris. The movers were the US, UK, France, and Germany. China did not oppose the move then.

**What happens now:**
For Pakistan to still be moved out of the grey list would require the votes of at least 15 of the FATF’s 36 voting members. At least three votes would be needed to block a move to blacklist Pakistan. The 36 countries include mostly developed Western nations, but also China, Hong Kong (China), Malaysia, and Turkey. Pakistan will likely make a diplomatic push to thwart blacklisting. It claims it has done enough on the action plan, banning Hafiz Saeed’s Jamaat-ud-Dawa and Masood Azhar’s Jaish-e-Mohammed, and taking over their properties.

Pakistan is in a precarious financial situation. It faces an estimated annual loss of $10 billion if it stays in the grey list; if blacklisted, its already fragile economy will be dealt a powerful blow.

(Source: Indian Express)

**6. UNSC meeting on Jammu & Kashmir:**

**Context:**
The United Nations Security Council had ‘closed consultation’ about the Kashmir issue for the first time in nearly 50 years, but no statements were issued at the end of the meeting.

**Background:**
Earlier this month Article 370 of the Indian Constitution, which granted special status to the state of Jammu and Kashmir, was revoked by the Indian Parliament. This decision was
strongly condemned by Pakistan. While India categorically referred it as an internal matter of the country, Pakistan has sought to internationalise the issue ever since.

**Course of events**
The UNSC informally discussed the situation in Jammu and Kashmir on China’s request. Neither India nor Pakistan were a participant to this meeting.  
1965 was last time the matter came up at the UNSC, while the last time India and Pakistan came up as a topic for discussion was in 1971. The UNSC had set up an UN Commission for India and Pakistan (UNCIP) in 1948 under Resolution 39, while it was mandated to plan a mechanism to ensure a plebiscite in the State under Resolution 47 of 1949.  
While briefing the media following the conclusion of the informal meeting the Indian Ambassador to the UN, Syed Akbaruddin, accused Pakistan and China of attempting to impart greater significance to the meeting than was warranted. According to him, the two states made national statements and tried to pass them off as the will of the international community.

China’s envoy expressed serious concerns about the situation including human rights issues. He said “parties concerned should refrain from taking any unilateral action that might further aggravate the tension there”. According to him, it is an international issue and undecided one and must be peacefully resolved in accordance with the UN charter, UNSC resolutions and bilateral agreements. The core of his argument was that India’s action has also challenged China’s sovereign interests and violated bilateral agreements on maintaining peace and stability at the border area.

Pakistan on the other hand, tried to convey that it stands ready for a “peaceful settlement” of the dispute. The Indian reply to this has always been “Stop terror to start talks”, as asserted by Mr. Akbaruddin. The Pakistani Foreign Minister said that this was the first step Pakistan was taking on behalf of the people of Jammu and Kashmir.

**Way ahead:**
Discussing the issue under UN auspices will be difficult for several reasons. First, the two parties (India and Pakistan) have continued the process of assimilation of territories under respective control into their union of states. Second, under the Simla Agreement of 1972 both sides had agreed to deal with it bilaterally.
7. Rohingya refugees protest exodus, demand rights in Myanmar

Context:
On 25th August 2019, nearly 200,000 Rohingya participated in rallies and demonstrations in Bangladeshi refugee camps (Cox’s Bazar) to mark the second anniversary of their exodus from Myanmar into Bangladesh.

Background:
In August 2017, more than 730,000 Rohingya people were forced to flee the Rakhine state of Myanmar in the wake of a brutal crackdown by its armed forces. Today more than 1 million Rohingya refugee live in Bangladesh.

Exploitation of the Rohingya community:
The protests were arranged for demanding their citizenship and other rights in the country they fled from. Banners reading “Never Again! Rohingya Genocide Remembrance Day,” and “Restore our citizenship” were spotted at the gathering. It came days after Bangladesh tried to start the repatriation of 3,450 Rohingya Muslims with the help of the U.N. refugee agency. But none of them agreed to go back voluntarily, and just didn’t show up at the border to go back to Myanmar. This was the second failed effort for their return, after the first one was attempted in November 2018. They feared for their safety and lacked confidence in the State of Myanmar. The repatriation deal is based on an understanding that the return has to be “safe, dignified and voluntary.” The UNHCR said that building confidence was essential for repatriation.

The Myanmar State has consistently denied them rights stating that the actions of the military were a justified response to the violence by Rohingya insurgents. In Myanmar, Rohingya are denigrated as “illegal immigrants” from Bangladesh, denied citizenship, and subjected to tight restrictions on freedom of movement.

A U.N.-established investigation recommended the prosecution of Myanmar’s top military commanders on charges of genocide, war crimes and crimes against humanity for the crackdown on the Rohingya. Another report by the U.N. Independent International Fact-Finding Mission on Myanmar stated that rapes of Rohingya by Myanmar’s security forces were systemic and demonstrated the intent to commit genocide. According to it, the discrimination Myanmar practiced against the Rohingya in peacetime aggravated the sexual violence toward them during times of conflict. The Advisory Commission on Rakhine State (which was appointed by Myanmar leader Aung San Suu Kyi in 2016 and led by former U.N. Secretary-General Kofi Annan) recommended that the government enforce segregation of Rakhine Buddhists and Rohingya Muslims, ensure full
humanitarian access, tackle Rohingya statelessness, “revisit” the 1982 Citizenship Law and punish perpetrators of abuses.

**Rohingya in India**
India estimates that 40,000 Rohingya live in camps across the country and has proposed plans for their deportation to their land of origin. However, two Rohingya men had moved the Supreme Court, challenging the government’s proposition. These petitioners said the UNHCR in 2016 registered and recognized the 40,000-odd Rohingyas in India and granted refugee identity cards to them. It said their deportation would violate the commitment to international conventions. The Supreme Court thus has agreed to hear a “substantial question” on whether illegal immigrants can be granted the status of refugees.

**Sources:** Hindu, Livemint, Business Standard

8. **Cattle Smuggling on India Bangladesh Border**

**Context:**
According to officials of the Border Security Force (BSF) hundreds of cattle were illegally sent from India to Bangladesh within a couple of days this week.

**What is the Issue?**
India and Bangladesh are two South Asian democracies and neighbours have the longest common border of over 4,000 km with each other. Cattle smuggling is a conflict issue, which is considered as huge loss for India; loss of its indigenous variety and trade. Cattle haats along the India-Bangladesh border are becoming a source of cattle for smuggling. New Method for Smuggling: Smugglers are using floods of river to smuggle bovines. Heads of the bovines are placed between two banana tree trunks and bound together. Then they are pushed to the water and river currents take them to the other side. Demands for cattle in Bangladesh goes up because of Bakr Eid. BSF officers trying to prevent it by using nylon nets, but wider river flow makes it difficult.

9. **Zimbabwe Protests**

**Context:**
On 16th of August Riot Police of Zimbabwe charge hundreds of protestors and opposition party workers who were protesting against the rising fuel prices.
History of Economic crisis in Zimbabwe: The Robert Mugabe period:
Being a dictatorial regime Robert Mugabe government was simply in need of money to bribe his enemies and bribe his allies.
So, the government enlarged the tax sphere and intended to get enough revenue.
This policy of taxation discouraged the investors and the businesses stayed away from Zimbabwe.
As a solution to get money Zimbabwe government started printing Money without any limitations.
As the supply of money increased its purchasing power got decreased. That cause inflation in Zimbabwe.
To solve this problem government printed more money.

In 2008 Zimbabwe legallised transaction in Foreign countries and counter the hyperinflation. That’s why Zimbabwe’s Economy is extremely dependable on International Currency. Current government lead by Emmerson Mnagagwa increased the fuel prices by 130% on 14 January 2019. From that day the protest are going on in various parts of Zimbabwe against the government. The threat of Breach of human rights by Zimbabwean police is also real based on their history.
The ongoing trade war(which is also a currency war)has aggravated the crisis. Rise in unemployment, Inflation, Rising Food prices are some of the recent economic trends in the country.

SCIENCE AND TECHNOLOGY

1. Restrictions on manufacture of Oxytocin

Context :
Recently the Supreme Court referred the matter dealing with ban on Oxytocin drug to a larger bench to decide whether it would be in public interest or not.

Background :
Last year in April 2018 the Health Ministry had notified ban on Private drug manufacturers producing Oxytocin and also restrictions on imports and decided to confine manufacturing to Karnataka Antibiotics and Pharmaceuticals Ltd, a government company.

About Oxytocin :
Oxytocin is the hormone which is released by the Pituitary Gland. It is also called as ‘Cuddle Hormone’ or ‘Love Hormone’.

Oxytocin has been best known for its roles in female reproduction. It is released in large amounts during labor and during breastfeeding. It is a facilitator for childbirth and breastfeeding. One of the oldest applications of oxytocin as a proper drug is as a therapeutic agent during labor and delivery. It is a stimulant widely employed to induce or augment labor, especially at term, when adequate oxytocin receptors are present. It is also one of the principal uterotonic drug used to prevent post-partum hemorrhage.

However, recent studies have begun to investigate oxytocin’s role in various behaviors, including orgasm, social recognition, bonding, and maternal behavior. For this reason, it is now sometimes referred to as the “love hormone” and many such names described earlier. Social bonding is essential to species survival since it favors reproduction, protection against predators and environmental changes, and furthers brain development. Exclusion from the group results in individual physical and mental disorders and leads ultimately to death, both in animal models and in primitive human tribes. Oxytocin and its receptors appear to hold the leading position among the candidates for the substance of “happiness.” If not “happiness,” at least it now seems to be an important brain compound in building trust, which is necessary in developing emotional relationships, a process also referred to as social bonding.

Oxytocin is responsible for bringing in what is specifically called as “maternal behavior.” If oxytocin antagonists are given to sheep and rat females after parturition, they do not exhibit typical maternal behavior. By contrast, virgin female sheep shows maternal behavior toward foreign lambs upon cerebrospinal fluid infusion of oxytocin, which they would not do otherwise.

Many studies done in the past 15 years have tried to study the relationship between autism and oxytocin. In 1998, Modahl et al., in their study found significantly lower levels of oxytocin in blood plasma of autistic children.

**Why ban?**

Oxytocin was misused in dairy industry. Where livestock is injected with Oxytocin to make them release milk at a time convenient to farmers. Oxytocin is also used to increase size of vegetables such as pumpkins, watermelons, gourds and cucumber.

**2. Parker Solar Probe Completes a year**

**Context:**

NASA’s Parker Solar Probe completed 1 year on August 12 this year.

**About the Mission:**
It is part of NASA’s “Living With a Star” programme that explores different aspects of the Sun-Earth system.
It will help in understanding Sun’s atmosphere.
It is also the closest a human-made object has ever gone to the Sun.
Duration of mission is 7 years during which it will complete 24 orbits.

Objectives of Mission:
Tracing the flow of energy that heats and accelerates the solar corona and solar wind.
Determining the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.
Explore mechanisms that accelerate and transport energetic particles.

Significance:
By exploring Sun we can get information about more stars in our Universe.
It will improve understanding of Earth
Disturbances in the solar wind shake Earth’s magnetic field and pump energy into the radiation belts, part of a set of changes in near-Earth space known as space weather. Hence it will improve understanding of Solar winds.
It will also help in understanding space weather.

3. Magnetospheric Multiscale Mission

Context:
Recently NASA’s Magnetospheric Multiscale mission (MMS) made the first precise measurements of an interplanetary shock using high-resolution instruments which provides ideal test beds for learning about larger universal phenomena.

About the Mission -
MMS consists of four identical spacecraft that orbit around Earth through the dynamic magnetic system surrounding our planet to study a little-understood phenomenon called magnetic reconnection.
Magnetic reconnection is a phenomenon unique to plasma, that is, the mix of positively and negatively charged particles that make up the stars, fill space and account for an estimated 99 percent of the observable universe.
MMS will travel directly through areas near Earth known to be magnetic reconnection sites. On the sun-side of Earth, reconnection can link the sun’s magnetic field lines to Earth’s magnetic field lines, allowing material and energy from the sun to funnel into Earth’s magnetic environment. On the night side of Earth, reconnection is believed to help trigger aurora, also known as the northern and southern lights.
**Objective:**
By observing magnetic reconnection in nature, MMS provides access to predictive knowledge of a universal process that is the final governor of space weather, affecting modern technological systems such as communications networks, GPS navigation, and electrical power grids. MMS will establish knowledge, methods and technologies applicable to future space weather missions and the future growth and development of space weather forecasting.
MMS sensors will measure charged particle velocities, as well as electric and magnetic fields, with unprecedented (milliseconds) time resolution and accuracy needed to capture the elusively thin and fast-moving electron diffusion region.

**4. Russia’s First Humanoid Robot**

**Context:**
Russian spacecraft carrying humanoid robot named ‘Fedor’ successfully docked at International Space station (ISS)

**About:**
It wil spend 10 days learning to assist astronauts on the International Space Station.
The robot has given name ‘Fedor’ means Final Experimental Demonstration Object Research.
Fedor blasted off in a Soyuz MS-14 spacecraft which is set to dock with the space station and will stay till September 7.
Instead of cosmonauts, Fedor, also known as Skybot F850, was strapped into a specially adapted pilot’s seat, with a small Russian flag in hand.
The silvery anthropomorphic robot stands 1.80 metres (5 foot 11 inches) tall and weighs 160 kilogrammes (353 pounds).
Fedor also has Instagram and Twitter accounts with posts saying it is learning new skills such as opening a bottle of water.
In the station, it will trial those manual skills in very low gravity.

**Significance:**
a) Fedor copies human movements, a key skill that allows it to remotely help astronauts or even people on Earth to carry out tasks while the humans are strapped into an exoskeleton.
b) Such robots will eventually carry out dangerous operations such as space walks, etc
c) It will potentially useful on Earth for working in high radiation environments, demining and tricky rescue missions.
GEOGRAPHY AND ENVIRONMENT

1) India: Largest Emitter of SO$_2$

**Context:**
In one of its reports, Greenpeace India has said that India is the largest emitter of SO$_2$ (Sulphur dioxide) in the whole world.
This data by Greenpeace is based on NASA’s Ozone Monitoring Instrument satellite.

**Findings of the report:**
India has near above 15% of the global anthropogenic SO$_2$ emission Hotspots.
Main cause for this pollution is coal based power plant. India lacks the implementation of Flue-Gas desulphurization (FGD)
Of the 45 hotspots for high SO$_2$ pollution in India, emissions at 43 hotspots are due to coal-based electricity generation. Pollution at the remaining two is caused by metal smelters.
Some largest SO$_2$ emission hotspots in the world are India, Russia, South Africa, Iran, Saudi, UAE, Mexico, Serbia and Turkey.
Surprisingly China and USA has performed well and they succeeded in cutting their SO$_2$ emission level and shifting towards clean energy sources.

**Effect of SO$_2$ Pollution**
SO$_2$ emissions are a significant contributor to air pollution. Its direct exposure and exposure to particulate matter PM2.5 (fine particulate matter) produced when SO$_2$ reacts with other air pollutants to form sulphate particles both affect human health.
Already 91% of the world population is living in the situation where outdoor air pollution level exceeds the safe level of air pollution as guided by World Health Organization. The SO$_2$ contributes to this problem also.
Because of Air pollution 4.2 million people die prematurely every year. This number will go on increasing if the world doesn’t adopt environment friendly measures in every industry.
SO$_2$ affects the respiratory system of humans in general and lungs in particular. It aggravates health conditions like asthma, chronic bronchitis, continuous coughing etc.

**Conclusion:**
Implementation of government policy which was planned in 2015 by environment ministry to set limits on SO$_2$ emissions from coal powered plants. The implementation of the policy was postponed from 2017 to 2022.
2. Iceland Loses its first glacier to Climate Change

*Why in news?*
The Okjokull glacier in the Iceland was lost in July (The warmest month ever recorded). The nation took the problem seriously and held a funeral for the glacier.

A Bronze plaque was mounted on the glacier’s top which is titled as ‘A letter to the future’. It is also labelled “415 ppm CO\textsubscript{2}”, referring to the record level of carbon dioxide measured in the atmosphere last May.

Iceland loses about 11bn tonnes of ice per year, and scientists fear all of the island’s 400-plus glaciers will be gone by 2200, according to Howe. Glaciers cover about 11% of the country’s surface.

*Melting of glaciers and Indian Subcontinent Hindukush-Himalaya Assessment report:*
International Centre for Integrated Mountain Development (ICIMOD) released a report on melting of glaciers in Himalayan region.

The Report says that 35% of glaciers in Himalayas could retreat till 2100. Even stopping of global temperature rise at 1.5\textdegree C to that of industrial revolution levels is of no use. This is a huge Environmental problem for the countries in the region. All major rivers in the region originate from these glaciers.

Areas in higher altitudes warm faster than areas in lower altitudes. A study suggest that if the temperature of the world increases by 1.5\textdegree C that means it will be 1.8\textdegree C in Hindu Kush Himalaya region.

Hindu Kush Himalaya region has area of 3500 Km. 210.53 million people of 8 countries in the region are directly dependent on this ecosystem. Western border of the region is Afghanistan and eastern is Myanmar. The region has 35,110 Sq.Km. of Snow-ice cover.

3. Interplanetary Pollution

*Context:*
Israeli aircraft Baresheet landed on lunar surface with accidental explosion. The aircraft was carrying tardigrade (living organisms) with it. So now the questions are raised that what will happen to those organisms on the Moon? Will they survive? Is their survival is harmful for moons environment? Are we polluting moon also because of anthropogenic activities?

*About tardigrade:*
It is a living organism which can only be seen under a microscope.
It’s a toughest creature on planet Earth. It can survive the gamma radiation, lack of oxygen and intense solar winds. It can live for 10 years without food and water. They can expel water from their own body when in need. They can again come to life if they are placed in water. That’s why tardigrade is called ‘come back to life’ rehydration organism.

**Baresheet Project:**

Beresheet was the first stage of a privately-funded initiative to transfer living DNA to the moon. The project is designed to act as Noah’s Ark Mark II, providing a repository from which plants and animals could be regenerated to repopulate the Earth should a catastrophe akin to a flood of biblical proportions overtake the planet.

**Conclusion:**

The recent incident of Baresheet suggests that humans have started to pollute or disturb the natural cycle of other planets also. Experts like Elon musk are setting their goals to colonize the moon with human settlement.

**But this case opens discussion on the topics like is it really possible to survive on moon and colonized it?**

There should be global policy which sets rules for one’s responsibility of cleaning debris generated because of one’s own space mission.


**Context:**

In a move to curb use of plastics, Union Minister of railways has directed all regional offices to ensure complete removal of single – use plastics from all railways stations effective from 2 October 2019.

The move is an effort by Indian Railways to shield the environment from menace of plastic.

**Single use plastic:**

Single – use plastic, or disposable plastics, are used only once before they are thrown away or recycled. In the process of breaking down, it releases toxic chemicals (additives that were used to shape and harden the plastic) which make their way into our food and supply.
**Key highlights:**

1) Indian Railways has directed all Railway units to enforce ban on single use plastic material, with less than 50 micron thickness of such plastic sheets impair functionality of product.

2) Emphasis is on making necessary arrangements to minimize generation of plastic waste, its eco-friendly disposal and to follow Plastic Waste Management rules.

3) Railway Ministry has also instructed its Railway units to administer a pledge on 2nd October 2019 to cut use of plastics and to adapt measures such as. Information, Education & Communication (IEC) to create awareness among railway users.

**Circular issued by Ministry of Railways in this regard states following Instructions**-

- Railways will work with vendors at all railway platforms to encourage all railway vendors to avoid use of plastic carry bags.
- Ban on single use plastic material.
- Railway employees should reduce, reuse and refuse plastic products and should use inexpensive reusable bags to reduce plastic footprint.
- IRCTC (Indian Railway Catering and Tourism Corporation) to implement return of plastic drinking water bottles as part of Extended Producer Responsibilities a strategy to add all of environmental costs associated with a product throughout product life cycle to market price of that product and Plastic Bottle crushing machines to be provided expeditiously for this purpose. In 1st phase 1,853 plastic water bottle crushing machines will be installed at 360 major station.

- Ban will be strictly enforced on railway stations from 2nd October 2019 and other properties across country as part of ‘Plastic Free Railway’.

**India’s efforts to beat plastic pollution:**

- More than 20 States and Union Territories have joined the fight to beat the plastic pollution, announcing a ban on single-use plastics such as carry bags, cups, plates, cutlery, straws and thermocol products.

- India has also won global acclaim for its “Beat Plastic Pollution” resolve declared on World Environment Day last year, under which it pledged to eliminate single-use plastic by 2022. All such efforts have yielded positive results: Voluntary initiatives are having an impact in many States, as citizens reduce, reuse and sort their waste. A Bangalore waste collective estimates that the volume of plastic waste that they collect dropped from about two tonnes a day to less than 100 kg.

**What is needed?**

Governments must start charging the producers for their waste, and collect it diligently, which will lead to recovery and recycling.
State and local governments should upgrade their waste management systems, which is necessary to even measure the true scale of packaging waste.

Role of local bodies: Local bodies should consult manufacturers or importers to assess the problem. Cities and towns need competent municipal systems to achieve this.

A central legislation with a clear definition of what constitutes single-use plastic is also necessary.

5. Brazil- Amazon Rainforest Fire

Causes of this Fire:
1) The series of Mega-droughts in Amazon which have triggered these fires.
2) Experts also claim that these fires are more of a manmade disaster because they have been caused by rapid deforestation for lumber industry, agriculture, mining, roads, dams etc.
As of now, an area equivalent to France has been cleared from the forest. (Source: Yale University Study)
3) A big blame is being put on Brazil’s administration which has been inactive in protecting the forests.

Effects:
It is adding to the menace of Climate Change. Forests contain carbon stored in the trees and vegetation. Here Amazon holds 459 tonnes of carbon per hectare. The burning has intensified the carbon emissions into the atmosphere.

Significance of Amazon:
1. It is the largest, that is they comprise 40% of the tropical rainforest in the world and produces approximately 20 per cent of the oxygen in the earth’s atmosphere and is called the “lungs of the planet”. They play a vital role in stabilising global temperatures.
2. Being large in area, it holds around 10-15% of plant and animal biodiversity of the earth.
3. The Amazon rainforest is also home to indigenous communities, tribes whose lives and homelands are under threat due to the fires.
4. A National Geographic report said the Amazon rainforest influences the water cycle not only on a regional scale, but also on a global scale. The rain produced by the Amazon travels through the region and even reaches the Andes mountain range.

6. BASIC Group:
Ministerial Meeting on Climate Change
Context:
BASIC countries (Brazil, South Africa, India and China) held their 28th Ministerial meeting on Climate Change recently in Sao Paulo, Brazil. It was held as a run up for the UNFCCC meeting.

Who are the BASIC:
It is geopolitical alliance (bloc) of four advanced developing countries – Brazil, South Africa, India and China. It was established by agreement in 2009. These four countries collectively account for one-third of world’s geographical area and nearly 40% of world’s population.

BASIC countries broadly have common position on reducing greenhouse gas emissions and raising the huge funds that are needed to fight climate change. And have cooperated in global climate negotiation as a bloc. They are committed to act together at the Copenhagen summit and campaign to promote other nations sign the Copenhagen accord.

The UNFCCC:
United Nation Framework Convention on Climate Change.
It is an international environment treaty.
Came into force from 1994.
Secretariat is located in Bonn, Germany.

Copenhagen summit:
The Copenhagen Accord contained several key elements. This included the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels.
Developed countries’ promises to fund actions to reduce greenhouse gas emissions and to adapt to the inevitable effects of climate change in developing countries.
Developed countries promised to provide US$30 billion for the period 2010-2012, and to mobilize long-term finance of a further US$100 billion a year by 2020 from a variety of sources.

The bodies formed under this summit are;
A mechanism on REDD-plus,
A High-Level Panel under the COP to study implementation of financial provisions,
The Copenhagen Green Climate Fund,
A Technology Mechanism.

Other groups working to fight climate change:
BASIC is one of several groups of nations working together to fight climate change and carry out negotiations within the UNFCCC. Other than BASIC, there are the Organisation of Petroleum Exporting Countries (OPEC), the group of countries of Central Asia, Caucasus, Albania and Moldova (CACAM), the Cartagena Dialogue, the Independent Alliance of Latin America and the Caribbean (AILAC), and the Bolivarian Alliance for the Peoples of our America (ALBA in Spanish), etc.

ECONOMY:

1) Enhanced Surcharge on Long Term Capital Gains Tax and Short Term Capital Gains Tax withdrawn

What are Capital gains?
Simply put, any profit or gain that arises from the sale of a ‘capital asset’ is a capital gain. This gain or profit is comes under the category ‘income’, and hence you will need to pay tax for that amount in the year in which the transfer of the capital asset takes place. This is called capital gains tax, which can be short-term or long-term.
Capital gains are not applicable to an inherited property as there is no sale, only a transfer of ownership. The Income Tax Act has specifically exempted assets received as gifts by way of an inheritance or will. However, if the person who inherited the asset decides to sell it, capital gains tax will be applicable.

What does surcharge on capital gains mean?
Surcharge on capital gains means an additional amount levied on the already existing tax which is imposed on either individuals with higher income or capital gains above a certain amount.

How does the surcharge work?
The surcharge on tax had been increased from 15 per cent to 25 per cent for those whose taxable income is more than ₹ 2 crore and up to ₹ 5 crore. And for those whose taxable income is more than ₹ 5 crore, the surcharge had been increased from 15 per cent to 37 per
This change applied to individuals, HUF, association of persons, the body of individuals and artificial judicial persons.

It is important to note that the above rates of surcharge are on the tax of equity gains and not the tax rates themselves.

**What will be the effect of such rollback?**

As per the announcement last Friday, this enhanced surcharge will not be applicable on long/short term capital gains arising from the transfer of equity shares/units referred to in section 111A and 112A respectively of the Income Tax Act.

What this means is that, as an investor, you will not have to pay the enhanced surcharge (25 per cent or 37 per cent) on gains made on the sale of equity mutual fund units and listed equity shares. Note that the original surcharge (15 per cent) continues even now; only the enhancement in the surcharge has been withdrawn.

Also, this benefit of the withdrawal of the enhanced surcharge is applicable only on capital gains made on the sale of equity mutual funds/listed shares.

The enhanced surcharge will continue on other capital gains, including on sale of unlisted equity shares and debt instruments. Besides, the enhanced surcharge will continue on other sources of income such as salaries, income from house property, business income and other sources.

### 2. Bank Recapitalisation – Basel III Norms

**Why in the news?**

Finance minister Nirmala Sitaraman announced that government is going to infuse Rs. 70000 crore in the Public sector banks in order to improve the liquidity in the market. In a recent report it was stated that this move will improve the loan growth by 13-15% which will help the banks to meet their Basel 3 norms.

**What is bank recapitalisation?**

Simply put, recapitalisation of banks mean adding capital to PSBs. As owners of PSBs, government can provide capital to them. Recapitalisation injects money without incurring any liability and is different from loan because, loan has to be repaid.

**What are Basel norms?**

Basel III is an internationally agreed set of measures developed by the BCBS in response to the financial crisis of 2007-09. The measures aim to strengthen the regulation, supervision and risk management of banks.

BCBS members are committed to implementing and applying standards in their jurisdictions within the time frame established by the Committee.
Basel 3 measures are based on three pillars:

**Pillar 1:** Improve the banking sector’s ability to absorb ups and downs arising from financial and economic instability.

**Pillar 2:** Improve risk management ability and governance of banking sector.

**Pillar 3:** Strengthen banks’ transparency and disclosures.

**What is BCBS?**

Basel Committee on Bank Supervision (BCBS). It is a committee under the Bank For International Settlements. Established in 1930, the BIS is owned by 60 central banks, representing countries from around the world that together account for about 95% of world GDP.

Its head office is in Basel, Switzerland.

Its mission is to serve central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks. It is the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters.

The Committee identifies global systemically important banks (G-SIBs) using a methodology that includes both quantitative indicators and qualitative elements. A global systemically important bank is a bank whose systemic risk profile is deemed to be of such importance that the bank’s failure would trigger a wider financial crisis and threaten the global economy.

**How will recapitalisation will help the banks to meet Basel 3 targets?**

The announcement by the Indian government that it will frontload its planned ₹70,000 crore capital infusion into the public sector banks will improve the bank’s capitalisation and help them calibrate their balance sheet growth.

It is estimated that the fresh capital will enable public sector banks to grow loans by around 13% - 15% in the fiscal year ending March 2020 (fiscal 2020), compared with about 10% in fiscal 2019, while also allowing them to meet the final Basel III capital requirements (regulatory minimums plus the capital conservation buffer)

**What is regulatory minimum?**

It is a buffer that banks are expected to maintain above the minimum risk-based capital requirements, as well as the capital conservation requirements that apply to banks that do not maintain such buffers.

**What is Capital Conservation requirement?**
The capital conservation buffer (CCoB) is a capital buffer of 2.5% of a bank’s total exposures that needs to be met with an additional amount of Common Equity Tier 1 capital. The buffer sits on top of the 4.5% minimum requirement for Common Equity Tier 1 capital.

Its objective is to conserve a bank’s capital. It is the mandatory capital that financial institutions are required to hold above minimum regulatory requirement.

According to Capital Conservation Buffer (CCB) norms, banks will be required to hold a buffer of 2.5% Risk Weighted Assets (RWAs) in the form of Common Equity, over and above Capital Adequacy Ratio of 9%. Capital Conservation Buffer currently stands at 1.875% and remaining 0.625% was to be met by March 2019.

3. Start Ups in India - Angel Tax withdrawn

*Who is an Angel Investor?*

An angel investor (also known as a private investor, seed investor or angel funder) is a high net worth individual who provides financial backing for small startups or entrepreneurs, typically in exchange for ownership equity in the company. Often, angel investors are found among an entrepreneur’s family and friends. The funds that angel investors provide may be a one-time investment to help the business get off the ground or an ongoing injection to support and carry the company through its difficult early stages.

*What is an Angel Tax?*

The angel tax, introduced in 2012 says that any person coming up with a startup have to pay a certain tax if they received an investment at a rate higher than their “fair market valuation.” Local tax authority in India value start-ups for what it is worth currently, instead of assessing them on the basis of what it could eventually become in the future. Angel tax essentially derives its genesis from section 56(2)(viib) of the Income Tax Act, 1961. The finance act, 2012 introduced section 56(2)(viib) in the IT act which taxes any investment, received by any unlisted Indian company, valued above the fair market value by treating it as income. The investment in excess of fair value is characterised as ‘Income from other sources’ and the tax imposed on it is known as Angel Tax since it largely affects angel investors investing in startups.
Currently, India levies a 30% angel tax. It was introduced in 2012 in a bid to curb money laundering via small companies. However, over the years, it has driven up regulatory and monetary pressure on budding firms, threatening their survival.

**Which investment falls under Angel tax?**

Angel tax is imposed only on investments made by a resident investor. It should be noted that angel tax is not applicable in case the investments are made by any non-resident or venture capital funds.

---

**4. Ramayana Circuit**

**Context:**

Railways decide to reintroduce Ramayana Circuit tours. This train covers important destinations connected with the life of Lord Rama in India and Sri Lanka.

**Swadesh Darshan Scheme:**

Ministry of Tourism (MoT) launched the Swadesh Darshan Scheme – for integrated development of theme based tourist circuits in the country in 2014-15. It is a Central Sector Scheme. India’s rich cultural, historical, religious and natural heritage provides a huge potential for development of tourism and job creation in the country.


**Some important objectives of the scheme are:**

a) Promote cultural and heritage value of the country to generate livelihoods in the identified regions

b) Enhance the tourist attractiveness in a sustainable manner by developing world class infrastructure in the circuit/destinations

c) Follow community based development and pro-poor tourism approach

d) Create awareness among the local communities about the importance of tourism for them in terms of increased sources of income, improved living standards and overall development of the area.
Tourism Industry in India:
The tourism industry contributed to 9.2% of India’s GDP and supported 8.1% of total employment.
(Source: World Travel and Tourism Council)

The Tourism and Hospitality industry is one of the largest service industries in India. It plays a role of significant economic multiplier and becomes critical since India has to grow at rapid rates and create jobs.

Source: PIB, Ministry of Tourism

POLITY

1. INX Media Case Against Chidambaram

Context:
Delhi High Court had rejected Chidambaram’s anticipatory bail. Apex court had denied him an immediate hearing and listed his case for August 23.

INX Media case: CBI filed an FIR against INX Media for violating the FIPB approval given to the company and receiving overseas funds. It is venture promoted by Peter Mukerjee and his wife Indrani, both of them are currently in jail for connection with the Sheena Bora murder case. In 2007 Foreign Investment Promotion Board (FIPB) approved FDI is 4.62 crore and not allowed a downstream investment. But INX Media violated FIPB and made a downstream investment and generated 305 correct in foreign investment.

Chidambaram Involvement: According to CBI, INX Media went into ‘criminal conspiracy’ with Karti Chidambaram, son of then finance minister P. Chidambaram. This led to Finance Ministry ignoring illegalities by INX Media. CBI filed FIR against Chidambaram, ED also filed case of money laundering against P. Chidambaram.

2. Motor Vehicle Amendment Bill, 2019

Context:
The Motor Vehicles (Amendment) Bill, 2019 was passed by Rajya Sabha. The Bill has been passed with three Government amendments and will need to go back to Lok Sabha. The Lok Sabha had already passed the Bill on the 23rd of July 2019.

About Bill:
The Motor Vehicles (Amendment) Bill, 2019 is based on the recommendations of the Group of Transport Ministers (GoM) of States constituted by the Ministry of Road Transport & Highways to address the issue of road safety and to improve the facilitation of the citizens while dealing with transport departments.

- Road Safety: It increases penalties to act as a deterrent against traffic violations. Stricter provisions are being proposed in respect of offences like juvenile driving, drunken driving, driving without a licence, dangerous driving, over-speeding, overloading, etc.
- Vehicle Fitness: The Bill mandates automated fitness testing for vehicles. Penalty has been provided for deliberate violation of safety/environmental regulations as well as body builders and spare part suppliers.

**HISTORY**

1. **DU- statues of Bhagat Singh, Bose, Savarkar- Their thoughts about each other**

**Context:**
Busts of Savarkar, Bhagat Singh, Subhas Chandra Bose removed from DU (Delhi University) campus.

**Savarkar and Bose:**
Ideologically, Bose was in conflict with Savarkar as Bose criticised the ideology of Hindutva.

But, there are well documented evidences on how Savarkar was an important link between Subhash Bose and Rash Behari Bose in Japan. On the advice of Savarkar, Rash Behari Bose wrote to Netaji Bose and informed him about the activities of revolutionary freedom fighters who were working under the Indian Independence League (IIL).

Also, radio broadcasts of Azad Hind Fauj from Singapore recognise the debt they owed to the vision of Savarkar.

**Bhagat Singh and Savarkar:**
Although both believed in revolutionary means, they differed in their Ideologies. Bhagat Singh believed in Marxism and Socialism. But at the same time he was inspired by the vision of nationalism provided by Savarkar. He was deeply influenced by the writings of Savarkar.

**Savarkar’s thoughts:**
Savarkar, condemned the irrational practices of religious rituals and advocated a strong embrace of science in what he described as the yantra yug, or the age of machines. His use of religion in political life was highly tactical—to unify people for the cause of Indian independence. Gandhi too used rich imagery drawn from Hinduism to mobilize public opinion. Moreover, Gandhi’s challenge to outdated religious practices was much more muted than Savarkar’s.

Savarkar’s use of “Hindutva” rather than Hinduism was an attempt—as Siegfried O. Wolf of Heidelberg University has noted—to overcome social and political grievances among the Hindu community. He believed in a democratic and secular state where every individual has the same rights irrespective of caste, creed, race or religion, as he mentioned in his several presidential speeches at the Hindu Mahasabha.

Savarkar was a modernist. He was an unabashed advocate of science and technology for the progress of mankind. A believer in strong and unified states, he was drawn towards leaders like Giuseppe Mazzini of Italy, Mustafa Kemal Atatürk of Turkey and Vladimir Lenin of the erstwhile Soviet Union. Savarkar was opposed to the non-violent doctrine of Gandhi but there is no record of him personally resorting to violence.

Our freedom fighters, despite of their ideological differences, respected each others’ opinions and worked in harmony for a common cause. Today’s political leaders have a lot to learn from this.