

OFFICERS'

Pulse

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Coverage.

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At a Glance & In Depth.

Polity and Social Issues
Economy
International Relations
Environment
Science and Tech
Culture..

**CURRENT AFFAIRS
WEEKLY**

THE **PULSE** OF UPSC AT
YOUR FINGER TIPS.



News @ a glance

Polity & Social Issues	3	MGNREGA payments	14
Vishakha norms for religious institutions	3	GST Council – Journey so far	14
Nari Shakti Puraskar 2018 Awards	3	MSME loans in 59 minutes	14
Uniform age for marriage	3	CAR 15	
Himachal reduces NMR by 15.8%	4	GST collection	15
Global Compact for Migration	4	RBI allows banks to provide partial guarantee to NBFC bonds	15
#OpenGovDataHack National Challenge	4	International Relations	16
Live-in partner can seek maintenance	5	China’s Elite security team in India	16
Judicial vacancies	5	India-Italy relationship	16
Pradhan Mantri Bhartiya Janaushadhi Pariyojana	5	Pak. accepts India’s invitation of SCO meet	17
Banning convicts from contesting	6	US Birthright Citizenship	17
Setu Bharatam Programme	6	China-Pakistan bus via PoK	18
Pakistanis awaiting Indian citizenship	6	India hopes for U.S waiver on Iran	18
Online sale of medicines	6	Botswana in International Solar Alliance	19
UTS on mobile app	7	United Nations World Tourism Organization (UNWTO)	19
Ease of mobility Index	7	Britain rejects Deepavali, Eid holidays	19
Economy	8	China all set to build permanent airport at the South Pole	20
Recovery of NPAs	8	Science & Technology	21
Depreciating rupee not helping exporters	8	IIT Guwahati uses Aloe Vera to remove oil from water	21
India’s largest Dry Dock	9	Bone marrow transplantation	21
India-Japan currency swap agreement	9	India home to two new gecko species	21
CPs & NBFCs	9	Spatial Cells	22
Financial Stability and Development Council	10	World’s smallest optical gyroscope	22
Invest India, Start-up India Hub	10	India Mobile Congress (IMC) 2018	23
World Bank-Ease of Doing Business	10	Taxi-Bots	23
GSP eligibility for India	11	Parker Solar Probe	23
NRIs deposits surge	12	Sterlite Industry & Pollution	23
MSME Outreach Programme	12	Kepler space telescope	24
Gold demand	12	Vehicle Location Tracking	24
Flexi-Fare scheme	12	Coconut oil as insect repellent	24
National Financial Reporting Authority	13		
Growth of Metro Rail	13		

Defence & Security	26	Environment health profile project	32
Dornier Aircraft	26	Air quality index	32
Humanity at Risk	26	1 st WHO Global Conference on Air Pollution & Health	33
Environment	28	Assault on Aravallis	34
Green firecrackers	28	10-Day Clean Air Campaign	35
Urban Cafe: River for Habitat	29	India's lone active volcano	35
Save Bandipur	29	Culture	36
National Innovations on Climate Resilient Agriculture (NICRA)	29	Statue of Unity	36
Living Planet Report 2018	30	Delhi Durbar Painting	37
Moths as Pollinators	31	Veer Surendra Sai	37
5 th dedicated R&D centre for bioenergy	31	Naga Club	37

News in-depth

General Studies-1	38	Need for strong regulatory mechanism over social media giants	46
Internal migration in India and its implications	38	India-Japan ties	47
General Studies-2	39	India hopes for U.S waiver on Iran	48
Challenges of working mother	39	General Studies 3	49
Always a fine balance	39	Draft National Electronic Policy 2018	49
India- Japan 13 th Summit	40	PPP in District hospitals	49
India- Maldives relation:	42	Strained RBI-Centre ties	50
India Pins its prestige on Mauritius project:	42	Who pays taxes and who doesn't	51
Strategic Partners:	43	Universities and Patents	52
Political Crisis in Sri Lanka	44	The Big Picture: Elephants' Right of Way	53
RTE Act and its performance	45	How old vehicles are scrapped, replaced in countries around the World	54
National Health Protection Scheme	45		

News @ a glance

Polity & Social Issues

Vishakha norms for religious institutions

What are Vishakha Guidelines?

- The Supreme Court judgement in Vishaka and others v. State of Rajasthan case gave the Vishaka guidelines to prevent sexual harassment of working women.
- This case marked the first step in the evolution of laws for the protection of women from harassment at the workplace.
- Vishaka guidelines were superseded in 2013 by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) (SHE) Act, 2013.
- It pl
- More about Vishaka guidelines -It also provided with the range to behaviour that would be termed as sexual harassment, which includes such unwelcome sexually determined behaviour such as
 1. physical contact and advances
 2. a demand or request for sexual favours
 3. sexually coloured remarks
 4. showing pornography
 5. Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

Why in News?

- The Supreme Court is scheduled to hear a PIL petition to extend the Vishaka guidelines against sexual harassment in workplace to ashrams, madrasas and Catholic institutions.
- The petitioners filed that religious institutions also have women employed there other than those working on a voluntary basis. Extension of Vishakha Guidelines to these religious institutions would assist in reducing sexually related crimes against women by gurus or leaders of those institutions.
- The petition also sought directions to the Centre to provide adequate measures for women safety at religious places by

conducting periodic checks by State women panels.

Nari Shakti Puraskar 2018 Awards

Nari Shakti Puraskar 2018

- The highest civilian honour for Women in India is conferred to exceptional Women and Institutions, who have been working incessantly towards the cause of Women Empowerment.
- The Awards, now in its 19th year, since 1999 recognise excellent contribution in the fields of Economic and Social Empowerment of Women.
- Every year, the President of India confers the Nari Shakti Puraskar on the 8th March on the occasion of International Women's Day. From 2016, 20 different awards are given.

Eligibility for nomination

- The awards are open to all individuals and institutions.
- In case of individual category, the awardee must be at least 25 years of age on the last date of receipt of nomination.
- If the applicant is an institution, it should have worked in the relevant field for at least 5 years.

Why in News?

- The Ministry of Women and Child Development has extended the deadline for receiving nominations for the coveted Nari Shakti Puraskar 2018 till November 30, 2018.

Uniform age for marriage

What's in the news?

- The National Human Rights Commission (NHRC) has submitted a report suggesting recommendations to the Union ministries of Law, Women and Child Development (WCD) and Education in order to eliminate child marriage.

Recommendations

- The marriageable age for both women and men should be **uniform** in India, in line with similar practice in over 125 countries in the world. Currently, the legal marriageable age in India is 18 for women and 21 for men.
- The Law Commission had also recently recommended that the legal age for marriage for both sexes, cutting across religion, should be fixed at 18 years.
- It argued that different legal age for marriage has perpetuated the notion that girls should always be younger than men at the time of marriage.
- Amendments should be made to make all marriages below 16 years to be “**void**” and 16-18 years to be “**voidable**”.
- The current law — Prohibition of Child Marriage Act, 2000 — recognises child marriage as a **valid** marriage but “voidable” at the option of the minor contracting party, which means the boy or girl who was a minor at the time of the marriage has the option of approaching the courts to declare the marriage void (within two years of attaining adulthood).
- In order to reduce dropout of girls, the **Right to Education Act** should be amended to extend it up to the age of 18 years, and completion of Class 12, instead of the present 14 years and completion of Class 10.
- NHRC also recommended that a sufficient number of child marriage prohibition officers should be appointed at the block level and village level by involving government functionaries.

Himachal reduces NMR by 15.8%

What's in the news?

- Union Health Minister J P Nadda inaugurated the **5th National Summit on Good and Replicable Practices and Innovations in Public Health Care System in India**.
- The objective of the summit is to share and learn the good practices and innovations being implemented by several states and organizations for the betterment of the health sector.

Highlights of the summit

- Himachal Pradesh was awarded for the highest annual decline in Neonatal Mortality Rate (NMR) and for highest

annual decline in Under 5 Mortality (U5MR).

- The award for highest annual decline in Infant Mortality Rate (IMR) was given to Kerala.
- For best performance in Family Planning, awards were given to West Bengal, Chhattisgarh and Rajasthan.
- NMR- Probability of dying during the first 28 days of life, expressed per 1,000 live births.
- U5MR- Probability of dying between birth and 5 years of age, expressed per 1,000 live births.
- IMR: Probability of dying between birth and 1 year of age, expressed per 1,000 live births.

Global Compact for Migration

What is it?

- It is the first, intergovernmental negotiated agreement, prepared under the United Nations, to cover all dimensions of international migration in a holistic and comprehensive manner.
- The process to develop this Global Compact started in April 2017. It is due to be formally approved at a Dec. 11-12 meeting in Marrakesh, Morocco.
- The compact has 23 objectives that seek to boost cooperation to manage migration and numerous actions ranging from technical issues like the portability of earnings by migrant workers to reducing the detention of migrants.
- It is legally non-binding,

Why in News?

- The Austrian government has announced that it won't sign the global compact citing concerns about national sovereignty. Already Hungary and the US have withdrawn from the pact in line with the rising protectionist measures.

#OpenGovDataHack

National Challenge

Background

- In 2017, Open Government Data (OGD) Platform of National Informatics Centre (NIC), in association with Internet & Mobile Association of India (IAMAI) launched a nationwide hackathon called **#OpenGovDataHack**.

- The hackathon aimed to enable participants develop their ideas into apps/infographics primarily by the use of open government data available in the OGD platform.
- On the open government data portal, the data produced or commissioned by the government or government controlled entities can be freely used, reused and redistributed by anyone.
- The hackathon was conducted in 7 cities around the themes of Water & Sanitation, Transport, Education, Crime and Health.

Why in News?

- Union Minister for Electronics & Information Technology Ravi Shankar Prasad has recently felicitated the winners of the #OpenGovDataHack National Challenge.

Live-in partner can seek maintenance

Protection of Women from Domestic Violence Act, 2005

- The Act provides protection to wife or female live-in partner from violence at the hands of the husband or male live-in partner or his relatives. The law also extends its protection to women, who are sisters, widows or mothers.
- Domestic violence under the Act includes actual abuse or the threat of abuse whether physical, sexual, verbal, emotional or economic.
- The act also has provisions for monthly payments of maintenance to victims to cover losses suffered by the aggrieved person and child of aggrieved person as a result of domestic violence.

Why in news?

- The Supreme Court has clarified that a live-in partner can seek maintenance under the provisions of the Domestic Violence Act, 2005.

Source- The Hindu

Judicial vacancies

What's in the news?

- The Supreme Court has warned state governments and high courts that it will take over the process of filling up vacancies in the lower judiciary if they fail to expedite the exercise.

- The directions came in the background of more than 5,000 judicial posts lying vacant in the subordinate courts which has led to nearly 2.8 crore pending cases.

Current status of appointments

- At present, all appointments of judges in district and subordinate courts are in the domain of state governments and high courts concerned.
- Inordinate delays in holding regular examination have led to almost 25% posts lying vacant in the lower judiciary.
- In **Malik Mazhar v. U.P. Public Service Commission(2008)** case, the Supreme Court laid down stage-wise timelines for lower judicial appointments — for civil judges (junior division) and district judges (direct recruitment) in 321 days and 183 days, respectively. However, they are seldom followed by states and HCs.
- In 2017, the Centre proposed a centralized examination to fill the over 5,000 judicial posts lying vacant in the lower judiciary. But states and high courts have opposed the suggestion.

Pradhan Mantri Bhartiya Janaushadhi Pariyojana

About PMBJP

- Pradhan Mantri Bhartiya Janaushadhi Pariyojana is a campaign launched in 2008 by the Department of Pharmaceuticals.
- The objective is to provide quality medicines at affordable prices to the masses.
- PMBJP stores have been set up to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.
- **Bureau of Pharma PSUs of India (BPPI)** is the implementation agency for PMBJP.

Who can open a Jan Aushadhi store?

- State Governments or any organization / reputed NGOs / Trusts / Private hospitals /charitable institutions/Doctors/ Unemployed pharmacist/ individual entrepreneurs are eligible to apply for new Jan Aushadhi stores.
- The applicants shall have to employ one B Pharma / D Pharma degree holder as Pharmacist in their proposed store.

Why in News?

- As per a recent survey conducted by the Bureau of Pharma PSUs of India (BPPI), the number of Janaushadhi stores in the

country has grown to more than 4300 in 640 districts. This has led to total savings of approximately Rs. 600 crores for common people, as these medicines are cheaper by 50% to 90% as compared to average market price of branded medicines.

Banning convicts from contesting

What's in the news?

- The Supreme Court is scheduled to hear a petition for a lifetime ban from contesting elections for politicians convicted in criminal cases.
- The Centre had previously informed the Supreme Court that the 1,765 Members of Parliament and Legislative Assemblies have criminal cases against them.

SC measure to cleanse politics

- In 2017, the Supreme Court directed the centre to set up special courts across the country to fast-track the long-pending trials of lawmakers. Following SC directions, the Centre had undertaken to set up 12 Special Courts for this purpose.
- Recently, the SC ordered candidates contesting in elections to declare their criminal records to the Election Commission in bold. Political parties were charged with the task of making this information public on their websites.
- In addition, both the candidate and parties were mandated to publish this information in newspapers and TV at least three times after nomination papers were filed.

Setu Bharatam Programme

About Setu Bharatam Programme

- It aims to make all National Highways free of railway level crossings by 2019.
- This is being done to prevent the frequent accidents and loss of lives by constructing 208 Railway over Bridges (ROB)/Railway under Bridges (RUB) at the level crossings.
- The Union Ministry of Road Transport and Highways is the implementing agency of the project.

Why in News?

- According to the latest government data, 3402 Unmanned Level Crossings (UMLCs) have been eliminated in last seven months. Balance 77 UMLCs have also been planned to be eliminated by December 2018.

- Most of the UMLCs have been eliminated either by provision of Subway/RUBs or by manning.

Pakistanis awaiting Indian citizenship

What's in the news?

- According to the Home Ministry database, nearly half the applications pending for Indian citizenship are from Pakistanis. Out of the 1,084 applicants who applied for Indian citizenship before 2011, as many as 526 are from Pakistan, followed by 103 applications from Afghanistan.
- According to the Citizenship Act, 1955, Indian citizenship can be acquired by birth, descent, registration and naturalisation.
- The power to grant citizenship lies with the Home Ministry.
- A parliamentary committee is examining the Citizenship (Amendment) Bill, 2016 which seeks to amend the Citizenship Act, 1955.

Citizenship (Amendment) Bill, 2016

- The Bill proposes illegal migrants who are Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, eligible for citizenship.
- Under the 1995 Act, one of the requirements for citizenship by naturalisation is that the applicant must have resided in India during the last 12 months, and for 11 of the previous 14 years.
- The Bill relaxes this 11 year requirement to six years for persons belonging to the same six religions and three countries.
- The Bill provides that the registration of Overseas Citizen of India (OCI) cardholders may be cancelled if they violate any law.

Online sale of medicines

Why in news?

- The issue of whether medicines can be sold online and mobile phone came up in Madras High Court.

More on online sales:

- A licence issued to a pharmacy for sale of medicines could be used to sell the drugs only from within a medical store and not beyond that through e-commerce.

- As of now, only draft rules have been framed by the government for permitting online sale of medicines.
- No firm in the country possesses a licence to sell medicines online. The existing licences could only be used for selling medicines in a store.
- When the judge pointed out that there was no express bar under the 1940 Drug and Cosmetics Act prohibiting pharmacies from selling medicines online, the senior counsel said, there was no enabling provision also in the law permitting e-sale of medicines.
- It is not a trade of textiles. It is drugs. Therefore, no prohibition is no answer at all.
- The judgement is yet to come, as of now an interim order in the case directing the Centre to stall online sale of medicines without licence.

UTS on mobile app

Why in news?

- Ministry of Railways has introduced Unreserved Mobile Ticketing app to help in seamless booking of unreserved tickets all over India.

- It has been introduced to promote 3C's- Cashless transactions, Contact less ticketing and Customer convenience.
- It will help in eliminating the long queue for passengers to get the tickets.
- This app helps in promoting environment friendly nature among public by cashless transaction.
- It has been made available in all types of mobile platforms.

Ease of mobility Index

Why in news?

- The Ministry of Road Transport & Highways has released India's first Ease of Mobility Index.
- The Index offers a source of information to aid planners to help in creating solutions with the preference of commuters.
- The report has been prepared by Ola Mobility Institute - Ola's research and social innovation arm.
- The index states that over 60% of respondents use public transport for travelling purposes.
- It also states that the majority of Indians are willing to adopt electric mobility.
- Kolkata has been selected as the city with most easily accessible of public transport.

Economy

Recovery of NPAs

Why in news?

- With the implementation of the insolvency and bankruptcy code, 2018 the government expects bad loan recoveries to exceed the Rs. 1.80 lakh crore-target for the current financial year.
- With changed rules the government expects that the broad awareness and with clearly laid down rules the NPA recovery is expected to go up.
- The **Insolvency and Bankruptcy Code, 2018 (IBC)** is the bankruptcy law of India which seeks to consolidate the existing framework by creating a single law for insolvency and bankruptcy.

What is NPA?

- According to RBI, it is the loans on which interest or instalment of principal remain overdue for a period of more than 90 days from the end of a particular quarter is called a Non-performing Asset.

What is insolvency and bankruptcy?

- Insolvency is the state of being unable to pay the money owed, by a person or company, on time; those in a state of insolvency are said to be insolvent.
- **Bankruptcy** is a legal status of a person or other entity that cannot repay debts to creditors. In most jurisdictions, **bankruptcy** is imposed by a court order, often initiated by the debtor.

Key Features of Bill

- The Bill clarifies that allottee under real estate project i.e. **buyer of** under-construction residential or commercial property will be considered as **financial creditor**.
- It specifies that in certain cases, such as when debt is owed to a class of creditors, the financial creditors will be represented on **committee of creditors** by authorised representative. These representatives will vote on behalf of financial creditors as per prior instructions received from them.
- The **voting threshold for decisions of committee of creditors has been lowered** from 75% to 51%.
- **Applicability of Code to Micro, Small, and Medium Enterprises (MSMEs):** The Bill specifies that ineligibility criteria for resolution applicants regarding Non

Performing Assets (NPAs) and guarantors will not be applicable to persons applying for resolution of MSMEs.

- It empowers Central government in public interest to modify or remove other provisions of IBC while applying them to MSMEs.
- **Withdrawal of submitted applications:** The Bill increases vote required for withdrawal resolution application from National Company Law Tribunal (NCLT) after such process has been initiated by 90% vote of committee of creditors.

Depreciating rupee not helping exporters

What is rupee depreciation?

- Rupee depreciation is when rupee value decreases (becomes less expensive) and more rupees can buy one unit of foreign currency.
- This is also known as weakening of rupee as now INR worth is less than foreign currency.
- Technically, when the value of rupee falls import becomes costlier and export is profitable.

Why in news?

- Despite the rupee rate being depreciated to the rate of Rs72 per dollar, there has been a fall in export by 2.34% in September.
- A depreciating currency is always considered to be good for export but the current situation does not seem to be so.

Reasons for the fall of exports

- **Higher input cost** because of the current depreciated rupee value makes export costlier also.
- **Tariff uncertainty due to uncertainty in GSP policy of USA.**
- The GSP (Generalised System of Preference) is a system where the U.S. allows certain eligible countries to export about 3,500 commodities to the U.S. on a duty-free basis.
- Earlier this year, the U.S. said it would be reviewing India's eligibility for this benefit. But still clear decision has not been taken on this issue.
- **No refund of IGST**, usually the exporters are refunded with GST collected as input

cost from CGST (Centre GST) and SGST (State GST) but the exporters complain that they are not receiving the refund with IGST (Integrated GST) when they operate on interstate.

- These concerns have to be taken care by the government to increase the exports when the rupee value has fallen.

India's largest Dry Dock

Why in news?

- The Union Minister for Shipping, Road Transport will lay the foundation for India's largest Dry Dock at Cochin Shipyard in Kerala.

What is dry dockyard?

- A dry dock is a narrow basin or vessel that can be flooded to allow a load to be floated in, and then drained to allow that load to come to rest on a dry platform. Dry docks are used for the construction, maintenance, and repair of ships, boats, and other watercraft.



Significance of this dockyard:

- The Dry Dock will give an impetus to "Make in India" initiative under Sagarmala and raise India's share in global shipbuilding to 2 percent. India currently occupies 0.66 % share in global shipbuilding market.
- With this Cochin Shipyard will be able to build specialized and technologically advanced large vessels.
- The project is aimed to be completed by May 2021 and is likely to create employment opportunity for 2000 people.

India-Japan currency swap agreement

What is currency swap agreement?

- A currency swap typically involves trade in local currency where countries pay for the imports and exports at predetermined

rate of exchange without involving a third currency like US dollars.

- It helps in fighting the short term liquidity mismatches.
- It is considered to be a foreign exchange transaction and is not required by law to be shown on a company's balance sheet.
- The purpose of a currency swap is to protect the exposure to exchange rate risk or reduce the cost of borrowing a foreign currency.

Benefits of Currency Swap Agreement:

- The government said that the currency swap agreement was very important to bring the investor confidence in the capital market in India, because even when rupee value falls down they can exchange currency.
- And it reduces the cost of capital for Indian companies while assessing the foreign capital market.
- The swap arrangement should aid in bringing greater stability to foreign exchange and capital markets in India.
- With this agreement in place the government can use the existing foreign exchange towards the development needs of our country, because when the need for the currency is there we can exchange it with Japan.
- This swap arrangement particularly reflects the depth of mutual trust and understanding between the two countries.

Why in news?

- The Prime Ministers of India and Japan, building on great friendship between the two countries and to further strengthen and widen the depth and diversity of economic cooperation, agreed during Prime Minister Modi's visit to Japan, to conclude a Bilateral Currency Swap Agreement for an amount of \$75 billion.

CPs & NBFCs

What is commercial paper?

- Commercial Paper (CP) is **money market instrument** in India, which was first introduced in 1990 to enable the **highly rated corporates** to diversify their resources for **short term fund requirements**.
- They are issued either in the form of a **promissory note or in a dematerialised form** through any of depositors approved by SEBI.

Why in news?

- With commercial papers (CPs) worth Rs. 1 lakh crore coming up for redemption by mid-November, non-banking finance companies (NBFCs) and micro-finance institutions (MFIs) are in a pressure on how to deal over the liquidity crisis.

What is the issue now?

- Large number of NBFC and Mutual fund institutions have given out Commercial Papers and it is estimated that almost CPs of worth 1 lakh crore is coming up for redemption by mid-November.
- While large NBFC and MFI have adequate cash the smaller ones are likely to face a liquidity crunch due to the unavailability of cash now in the current economic situation.

What has been done?

- Anticipating liquidity crunch, the RBI has announced ₹40,000-crore liquidity infusion in November through open market operations.
- Open market operations (OMO) refer to the buying and selling of government securities in the open market in order to expand or contract the amount of money in the banking system. Securities' purchases inject money into the banking system and stimulate growth, while sales of securities do the opposite and contract the economy.

Financial Stability and Development Council

About FSDC

- Financial Stability and Development Council (FSDC) is an apex-level body constituted by the government of India.
- It is an autonomous body dealing with macro financial regularities in the entire financial sector of India. An apex-level FSDC is not a statutory body.
- The recent global economic meltdown has put pressure on governments and institutions across the globe to regulate their economic assets. This council is seen as India's initiative to be better conditioned to prevent such incidents in future.
- The new body envisages to strengthen and institutionalise the mechanism of maintaining financial stability, financial sector development, inter-regulatory

coordination along with monitoring macro-prudential regulation of economy.

- The FSDC is headed by the Finance Minister and comprises the RBI Governor, the SEBI Chairman, and heads of regulators such as PFRDA, IRDAI and the Chairman of the Insolvency and Bankruptcy Board.

Why in news?

- Recently the FSDC met under finance minister Arun Jaitley to discuss on the current economic and liquidity situation of our country.

Invest India, Start-up India Hub

About Invest India:

- 'Invest India' is India's official agency dedicated to investment promotion and facilitation.
- Invest India is essentially an Investment Promotion Agency in India.
- Operationalized in early 2010, Invest India is set up as a joint venture company between the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry, Federation of Indian Chambers of Commerce and Industry (FICCI), and State Governments of India.

About Startup India Hub:

- Startup India is a flagship initiative of the Government of India, intended to build a strong eco-system for nurturing innovation and Startups in the country that will drive sustainable economic growth and generate large scale employment opportunities.
- The Government through this initiative aims to empower Startups to grow through innovation and design.

Why in news?

- In an effort to fuel the growth of India's entrepreneurial and small business community, Invest India through its flagship initiative Start-up India Hub has partnered with WhatsApp on a program that focuses on the proliferation of start-ups, promoting economic growth and generating employment opportunities in India.

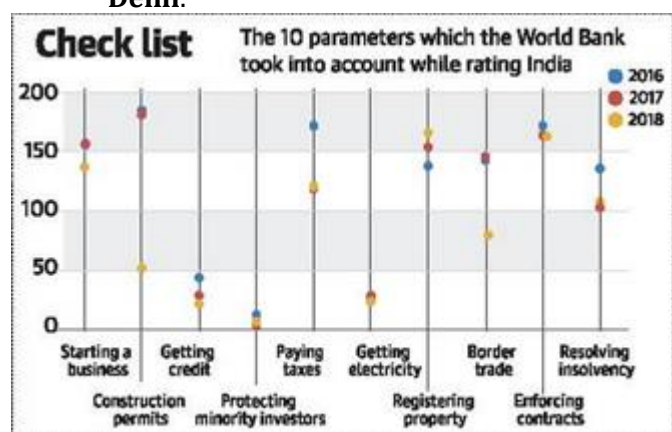
World Bank-Ease of Doing Business

About World Bank Ease of Doing Business Report

- The ease of doing business index is an index created by the World Bank Group.

Economies are ranked on their ease of doing business, from 1–190.

- A top rank means the regulatory environment of the country is more conducive to the starting and operation of a local firm.
- A nation's ranking on the index is based on the average of 10 sub-indices: Starting a business, Dealing with construction permits, Getting electricity, Registering property, Getting credit, Protecting investors, Paying taxes, Trading across borders, Enforcing contracts, Resolving insolvency, Distance to frontier, Entrepreneurship, Good practices and Transparency in Business Practices.
- In India, these rankings are based on the business environment in **Mumbai and Delhi**.



The important features of India's performance this year are:

- The World Bank has recognized India as one of the top improvers for the year.
- This is the second consecutive year for which India has been recognized as one of the top improvers.
- India is the **first BRICS and South Asian country to be recognized as top improvers** in consecutive years.
- India has recorded the highest improvement in two years by any large country since 2011 in the Doing business assessment by improving its rank by 53 positions.
- As a result of continued performance, India is now placed at first position among South Asian countries as against 6th in 2014.
- There is a large improvement in areas such as 'dealing with construction permits', 'trading across borders', 'getting

electricity', 'getting credit' and 'starting a business'.

- However, compared to last year, India saw its ranking dip on various other parameters, such as "registering property", "protecting minority investors", "paying taxes" and "resolving insolvency".

Why in news?

- India jumped 23 ranks in the World Bank's Ease of Doing Business Index 2018 to **77**. In the 2017 report, the country was ranked 100.
- The Index ranks 190 countries based on 10 indicators across the life-cycle of a business, from "starting a business" to "resolving insolvency."

GSP eligibility for India

What is GSP?

- The Generalised System of Preferences (GSP) is one of the oldest trade preference programmes in the world, under which developed countries offer preferential treatment (such as zero or low duties on imports) to products originating in developing countries.
- The GSP programme of U.S. allows market access at nil or low duties for about 3,500 Indian products.

Why in news?

- The US recently revoked the duty free concession under GSP (Generalised System of Preference) of 90 products out of which **50 are from India**.
- Most of the products are from handloom and agriculture sectors reflecting Trump administration's tough stand on trade related issues.

Eligibility Review of India

- On April 2018, The United States Trade Representative (USTR) launched a GSP eligibility review of India to assess whether India is providing equitable and reasonable market access to products from the US.
- The review is based on complaints from US' dairy and medical device industries alleging that India has implemented a wide array of trade barriers that affecting the US exports in those sectors.

More about the revocation:

- The proclamation however is product specific and not country specific.

- With India being the largest beneficiary of GSP, it has been the most hit by the US decision.
- The volume of India's export to the US impacted by the latest move of US is not known yet, but it is likely that small and medium businesses would be impacted the most.

NRIs deposits surge

Why in news?

- Non-resident Indian (NRI) deposits jumped to \$5.7 billion in the first five months of this fiscal compared to \$0.5 billion in the same period last year.

Causes of rise of NRI deposit

- The **first reason is slide in the value of Indian rupee**(depreciation-the fall in value of currency with respect to one or more foreign currency), which makes the deposits in the rupee attractive to NRIs. The reason is that since the value of rupee is down the cost of investment will be less and return will be high for the investors.
- **Non-Resident (External) Rupee Account** was the main contributor at \$4.1 billion compared to \$1.7 billion during the same period of the previous year. These deposits are maintained by converting the external currency to rupees and they have free repatriation and are tax free.
- Also, **when currency depreciates, interest rates for deposits in the country moves up.** So, prospective interest earnings also go up. This too incentivises NRIs to send more money during the episodes of currency depreciation.
- The **second reason is rise in oil price.** The rise in oil prices has benefitted the NRIs from UAE and Middle East who has started investing in India.

MSME Outreach Programme

What's in the news?

- The Prime Minister, Shri Narendra Modi to launch the MSME Support and Outreach Programme; MSME Outreach Programme to run for 100 days covering 100 Districts throughout the country.

About the Outreach programme

- MSME Outreach Programme will run for 100 days covering 100 Districts throughout the country.

- Various Central Ministers are likely to visit these districts in order to apprise the entrepreneurs about various facilities being extended to MSME Sector by the Government and financial institutions and to come forward and make best use of these facilities including access to credit and market, etc.
- Various announcements and deliverables focused on access to credit, access to market, hand holding and facilitation support measures etc. for MSME sector.
- In short, it is expected that this Outreach Programme will help in further boosting the MSME sector since this sector is one of the major generator of employment opportunities and making a significant contribution to the overall growth of the economy.

Gold demand

Why in news?

- Recently the World Gold Council issued a report, which has highlighted 10% growth in gold in 2018 compared to 2017.
- Further, while the jewellery demand was up 10%, the investment demand for coins and bars increased by 11% compared to the third quarter of last year.

About the Gold demand trend

- The high demand is due to: Low tax base of GST which enabled increased money circulation and the festive season now.
- The low demand earlier was due to: Fall in value of rupee; flood in Kerala and election in various states.

World Gold Council

- The World Gold Council is the market development organisation for the gold industry. It works across all parts of the industry, from gold mining to investment, and their aim is to stimulate and sustain demand for gold.
- Headquartered in London United Kingdom, they have offices in India, China, Singapore, Japan and the United States.

Flexi-Fare scheme

About flexi-fare scheme:

- It was introduced by Ministry of Railways in 2016.
- The fare of the passengers is increased by 10 per cent for every 10 percent of seats allocated under the flexi-fare.

- By which the cost of travel increases as the demand of the tickets increases.

Why in news?

- The Indian Railways have reduced the flexi-fare rate in as many as 101 trains, while fully scrapping the scheme for 15 premium trains, providing a big relief to the railway passengers.

The review of Flexi-Fare scheme:

- The review of the flexi-fare scheme was done based on the recommendation of the review committee, comptroller and the auditor general's report(2016), and representations from passengers.
- CAG in its report in 2017 noted that flexi fare scheme is not of much success because air transport is comparatively cheaper and faster than the railways.
- The Ministry of railways appointed review committee also suggested the rationalisation of the scheme.

National Financial Reporting Authority

Why in news?

- The Committee of Experts has submitted its report on Regulating audit firms and the Networks to the Government of India through the Secretary, Ministry of Corporate Affairs.
- The Committee was constituted on April, 2018 pursuant to the directions of the Supreme Court in the issues arising out of corporate scams due to chartered accountants.

Committee Recommendations:

- The report addresses the issues raised by the Supreme Court with a focus to strengthen the legal regime of auditors and promote development of the audit profession in the country.
- The global trend indicates a clear shift from self-regulation to independent regulatory structure in the domain of audit regulation due to the failure of self-regulatory model in regulating the professionals.
- In this light , the committee found the establishment of National Financial Reporting Authority(NFRA) as necessary reform and it has to be further strengthen to regulate auditory reforms.
- Since it is important to facilitate a business friendly environment for corporate and professionals in India, Indian laws and

regulations on professional services needs to keep pace with changing market dynamics.

About NFRA:

- National Financial Reporting Authority (NFRA) is a body proposed in Companies Act 2013 for the establishment and enforcement of accounting and auditing standards and oversight of the work of auditors.
- After the Satyam scandal took place in 2009, the Standing Committee on Finance proposed the concept of the National Financial Reporting Authority (NFRA) for the first time in its 21st report.
- The establishment of NFRA as an independent regulator for the auditing profession will improve the transparency and reliability of financial statements and information presented by listed companies and large unlisted companies in India.

Growth of Metro Rail

What's in the news?

- Over 664 km of metro rail projects in 15 cities are currently under various stages of implementation, while more than 515 km are already operational, according to Housing and Urban Affairs Minister Hardeep Singh Puri.

More on this project

- In order to create an ecosystem for metro rail, the Ministry of Housing and Urban Affairs has notified the Metro Rail Policy, 2017.
- The policy bridges the gap for ascertaining and enhancing the feasibility of metro rail projects from economic, social and environmental perspective.
- This aims to focus on systematic planning and implementation of metro rail systems and act as a guide to state governments for preparing comprehensive proposals for metro rail projects.
- The policy also enables greater private participation and innovative financing through Transit Oriented Development (TOD) and Value Capture Finance (VCF).

What is Transit Oriented Development (TOD)?

- In urban planning, a transit-oriented development (TOD) is a type of urban development that maximizes the amount of residential, business and leisure space

within walking distance of public transport.

What is Value Capture Finance (VCF)?

- Value capture is a type of public financing that recovers some or all of the value that public infrastructure generates for private landowners.

MGNREGA payments

Why in news?

- In the Financial Year 2018-19, so far 92% wage payments under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been generated within 15 days.
- This percentage was 26.85% in 2014-15, indicating the remarkable improvement towards making timely payments.

How was the success possible?

- Each and every asset under MGNREGS is geo-tagged and available in the public domain for scrutiny. All current works are monitored by geo-tagging have before, during, and after completion to ensure full transparency in all works.
- Nearly 100% expenditure is now through Electronic Fund Management System (e-FMS) indicating the thrust on quality, transparency, and accountability.

What is MGNREGA?

- National Rural Employment Guarantee Act 2005 (or, NREGA No 42, later renamed as the "Mahatma Gandhi National Rural Employment Guarantee Act", MGNREGA), is an Indian labour law and social security measure that aims to guarantee the 'right to work'.
- It aims to enhance livelihood security in rural areas by providing at least 100 days of wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

GST Council – Journey so far

Why in news?

- Till date, the Goods and Services Tax (GST) Council has taken 918 decisions related to GST laws, rules, rates, compensation and taxation threshold etc.
- More than 96% of the decisions have already been implemented through 294 Notifications issued by the Central Government and the remaining is under various stages of implementation.

- This shows the success of Cooperative federalism.

About GST Council:

- The GST Council was constituted on 15th September 2016 under Article 279A of the Constitution.
- It consists of the Union Finance Minister (Chairperson), Union Minister of State in charge of the Revenue or Finance and the Minister in charge of Finance or Taxation or any other Minister nominated by each State Government. Union Revenue Secretary is the ex-officio Secretary to the GST Council.
- The working of GST Council has ushered in a New Phase of Cooperative Federalism where the Central and the State Governments work together to take collective decisions on all issues relating to Indirect Tax regime of the country.

MSME loans in 59 minutes

Why in news?

- The Union Minister of Finance and Corporate Affairs, Shri Arun Jaitley launched a web portal **www.psbloansin59minutes.com** transformative initiative in MSME credit space.

About the portal

- The web portal www.psbloansin59minutes.com will enable in principle approval for MSME loans up to Rs. 1 crore within 59 minutes from SIDBI and 5 Public Sector Banks (PSBs).
- It is a strategic initiative of SIBDI led PSB consortium incubated under the aegis of Department of Financial Services (DFS), Ministry of Finance.
- The Portal sets a new benchmark in loan processing and reduces the turnaround time from 20-25 days to 59 minutes.
- Subsequent to this in principle approval, the loan will be disbursed in 7-8 working days.

Advantages of the portal

- A first in MSME banking credit space, the portal is one of its kind platforms in MSME segment which integrates advanced fin-tech to ensure seamless loan approval and management.
- The loans are undertaken without human intervention till sanction and or disbursement stage.

- A User Friendly Platform has been built where MSME borrower is not required to submit any physical document for in-principle approval.
- The solution uses sophisticated algorithms to read and analyse data points from various sources such as IT returns, GST data, bank statements, MCA21 etc. in less than an hour while capturing the applicant's basic details using Smart analytics from available documents.
- The system simplifies the decision making process for a loan officer as the final output provides a summary of credit, valuation and verification on a user-friendly dashboard in real time.

CAR

Why in news?

- While the government wants the capital adequacy ratio (CAR) of banks to be at 8% as per Basel norms, but RBI has prescribed 9%.

What is Capital Adequacy Ratio?

- Capital Adequacy Ratio (CAR) is the ratio which protects banks against excess leverage, insolvency and keeps them out of difficulty.
- It is defined as the ratio of banks capital in relation to its current liabilities and risk weighted assets.
- Risk weighted assets is a measure of amount of banks assets, adjusted for risks.
- An appropriate level of capital adequacy ensures that the bank has sufficient capital to expand its business, while at the same time its net worth is enough to absorb any financial downturns without becoming insolvent.
- $CAR = \frac{\text{Tier I} + \text{Tier II} + \text{Tier III (Capital funds)}}{\text{Risk weighted assets}}$
- The risk weighted assets take into account credit risk, market risk and operational risk.

Why RBI wants banks to maintain higher CAR?

- Avoid potential losses and banking crises.
- RBI says banks in India remain one of the most under provisioned ones in maintaining CAR.

GST collection

Why in news?

- Goods and services tax (GST) collections in the month of October crossed the Rs. 1 lakh crore mark, with total collections for the month standing at Rs. 1,00,710 crores.
- GST collections had crossed the comfort level of Rs. 1 lakh crore for the first time in April this year. The average GST revenue during 2017-18 was Rs. 89,885 crores.

What are the reasons behind it?

- The reduction in tax rates under GST in July seems to have helped improve compliance among small businesses, leading to an increase in overall tax collection.
- It also helps to reduce the distortionary effect of indirect taxes.
- Current spurt may be due increased consumption and expenditure in the festival season.

RBI allows banks to provide partial guarantee to NBFC bonds

Why in news?

- The Reserve Bank on Friday permitted banks to provide partial credit enhancement (PCE), or a partial guarantee, to bonds issued by systemically important NBFCs and Housing Finance Companies, a move that will enhance their liquidity position.

What is Partial Credit Enhancement (PCE)?

- Credit enhancement is used to obtain better terms for an outstanding debt. Through credit enhancement, the lender is provided reassurance that the corporate borrower will honour its obligation through additional collateral, insurance or a third-party guarantee.

More on this guarantee:

- Only the existing NBFC, HFC bond will be covered. This move will enable confidence in NBFC when they are facing liquidity crisis.

International Relations

China's Elite security team in India

Why in news?

- A delegation from China that is responsible for the security of the top seven members of the Chinese leadership will visit India in November to hold talks with India's Elite Special Protection Group (SPG).

Background

- The Chinese team visit come after the Chinese Minister of Public Security Mr. Zhao visited India in early October of this year.
- The Chinese Minister visit was seen as the greater intent to carry forward practical cooperation, especially with India's police force. Both Minister and delegation visit came after the Wuhan informal summit between the leaders of both countries.

Significance of their arriving

- The visit represents growing ties between India and China. Both will have a chance to learn regarding VVIP security.
- Indian counterpart is keen to learn regarding cyber security across borders, in which China has mastery.

About Special Protection Group (SPG)

- The Special Protection Group (SPG) was raised in 1985 (after the assassination of then PM Indira Gandhi) with the intention to provide proximate security cover to the Prime Minister,
- It was then brought under the Special Protection Group Act, 1988 and governed by the Cabinet Secretariat of India.
- After Rajiv Gandhi assassination in 1991, the SPG Act was amended to provide security to former Prime Ministers and also to their immediate families.

India-Italy relationship

Why in news?

- Prime Minister of Republic of Italy Mr. Giuseppe Conte visited India on 30th October 2018 to commemorate 70th anniversary of establishment of diplomatic relations between India and Italy.

More in News

- PM Conte will hold talks with PM Modi to boost cooperation in key areas such as trade and investment and he participated

in the 24th edition of the India-Italy Technology Summit.

- India invited Italian defence equipment manufacturing companies to invest in India under the Make India Initiative.
- The visit of the Italian Prime Minister will help to underscore these synergies and give an added boost to future collaboration.
- PM Conte indicated his support for India's quest for membership in the Nuclear Suppliers Group and underlined Rome's Support to India's membership in the global Technology export groups.

About Italy

- It is a peninsular country (covered by water from 3 sides) and located in the heart of the Mediterranean Sea, Italy shares land borders with France, Switzerland, Austria, Slovenia, San Marino, and Vatican City.
- Italy has a largely temperate seasonal and Mediterranean climate.
- The Renaissance is believed to be began in Italy and spread to the rest of Europe, bringing a renewed interest in humanism, science, exploration and art.
- The Apennine Mountains form the peninsula's backbone and **the Alps form most of its northern boundary**, where Italy's highest point is located on Monte Bianco (4,810 m or 15,780 ft.). **The Po**, Italy's longest river (652 kilometres or 405 miles), flows from the Alps on the western border with France and crosses the Padan plain on its way to the Adriatic Sea.



Significance of Italy to India:

- According to the Director General of Foreign Trade (DGFT) data, Italy is India's 5th largest trading partner in the EU with the trade balance in favour of India.
- According to the Department of Industrial Policy and Promotion (DIPP) data, Italy is the 13th largest investor in India.
- In the EU, Italy has the third largest presence of Indian community (estimated at 180,000) after the UK and the Netherlands.

About 24th edition of India-Italy Technology Summit

- 24th edition of the India-Italy Technology Summit is being organized by Department of Science and Technology in partnership with Confederation of Indian Industry.
- This edition of the Summit focuses on seven areas viz. clean tech, Renewable, ICT, Healthcare, Aerospace, Education and Cultural Heritage. The objective of the Summit is to facilitate technology transfers, joint ventures, R&D, and market access between industry and research institutions in India and Italy.

Pak. accepts India's invitation of SCO meet

Why in news?

- India will host Pakistan and other member-countries of Shanghai Cooperation Organization meeting on handling urban disasters.

What it is?

- The National Disaster Response Force is hosting the preparatory meeting for the 'Joint mock exercise on urban earthquake search and rescue' to be held next year in India.
- The meeting assumes significance because Pakistan has accepted the India's invitation to attend the meeting.
- This is to prepare for joint rescue operation and humanitarian assistance in the moments of disasters.

About Shanghai Cooperation Organization:

- Shanghai Cooperation Organization or SCO is an Eurasian political, economic and security organization headquartered in Beijing, China. SCO grew out of Shanghai Five founded in 1996 with China, Russia, Kazakhstan, Kyrgyzstan and Tajikistan as its original members, now SCO comprise of eight member states

namely India, Pakistan, China, Tajikistan, Uzbekistan, Russian Federation, Kyrgyzstan, and Kazakhstan.

- The Main objective of the organization is military cooperation between members. It also works towards intelligence-sharing, counter terrorism operations in Central Asia.
- Recently 18th SCO Summit concluded with the adoption of the Qingdao Declaration which calls for implementing three year plan to combat terrorism, separatism and extremism.

About National Disaster Response Force (NDRF):

- NDRF is India's elite disaster mitigation combat force established in 2006 under "The Disaster Management Act, 2005". It functions under the Union Ministry of Home Affairs.
- NDRF by its 12 Battalions across the country undertake special disaster response, relief, rescue operation and combat in the case of an event of any disaster, accident or emergency.
- Recently NDRF recently created National Disaster Response Reserve in all its battalions. The reserve will have necessary relief material like readymade food, medicines etc. to be distributed during distress in calamity-hit areas.

US Birthright Citizenship

What is Birthright citizenship?

- Birthright citizenship, a legal term that means "right of the soil," is the right guaranteed by the 14th Constitution Amendment, and upheld by the Supreme Court that says anyone born on U.S soil is automatically an US citizen.

Why in news?

- US president Trump through his executive order seek to scrap the Constitutional Right of Citizenship for US born children of non-citizens and illegal immigrants by finding a way around the 14th Amendment to the US Constitution.

Background

- The U.S. is one of the 30 other countries that also grant citizenship to children born within their borders.
- Citizenship policies vary around the world, somewhat based on geography. Countries in Europe or Asia don't have similar policies, but countries further west,

including Canada and most South American nations, do.

What's the main contention now?

- Some conservatives have long made the argument that the 14th Amendment was meant to apply only to citizens and legal permanent residents, not immigrants who are present in the country without authorization. They say, birth right citizenship was based on a misreading of the amendment, and of an 1898 Supreme Court ruling that they argue pertain only to the children of legal residents.

What is the 14th Amendment?

- The 14th Amendment, which grants citizenship to anyone born on U.S. soil, was ratified in 1868 after the Civil War so that recently-freed slaves could become citizens.
- The amendment reads, "All people born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside."

Implications

- Aside from being unconstitutional, thus it violates Article 2 of the Constitution, which states the president "shall take Care that the Laws be faithfully executed.
- This executive order can rise racial tensions, exploit fears and drive further polarization across the country at a moment when there is need of promotion of unity and inclusion.
- Executive order, dramatically reshape US immigration policies, where it will deny the citizenship for children of Indian professional working in US.

China-Pakistan bus via PoK

Why in news?

- India has shown opposition to a proposed luxury bus service between Pakistan and China that would pass through parts of Pakistan-occupied Kashmir and Gilgit-Baltistan territory.
- India claims this new bus service is a violation of India's sovereignty as it passes through POK region.
- Government has also summoned a Chinese diplomat to lodge a strong protest against the initiative.

What has been the issue?

- The new bus service can be seen as a part of China Pakistan Economic Corridor (CPEC).
- China's stand that the CPEC was an economic project, it is an economic cooperation project between China and Pakistan and not targeted at any third party. It has nothing to do with the territorial dispute and it will not affect China's principled position on the issue of Kashmir.
- Officially, Chinese statements maintain neutrality: Most of its statements are on the following lines: "We want two of our close neighbours and friends to resolve their conflicts by dialogue."

About CPEC project

- The CPEC is a 15-year project between Pakistan and China, which aims to connect the ancient Chinese trading town Kashgar with Pakistan's deep-sea Gwadar port via PoK (Pakistan occupied Kashmir) through a network of highways, railways and oil and gas pipelines and fibre optic cables.
- This aims at rapidly expanding and upgrading Pakistan's infrastructure and strengthening the economic ties between the People's Republic of China (China) and Pakistan.
- The CPEC, once completed is expected to cut short the trade route for China's oil imports by 6000 miles. It is expected to open up a brand-new strategic gateway for China to tap into African, West Asian and South Asian trade.

Way forward

- India should engage its diplomatic resources to lodge strong protest against any moves that would keep our territorial integrity under question.

India hopes for U.S waiver on Iran

Why in news?

- As the November 4 fast approaching a deadline that USA gave its allies to cut oil import by zero, Indian government hopes for possible US waiver.
- The spokesperson of the Ministry of External Affairs said India has been in talks with the U.S. as well as with Iran to ensure uninterrupted energy supply.

Background

- On 8 May, USA came out from the international nuclear deal with Iran. Revoking the deal US administration

announced to re-impose the US economic sanctions on Iran.

- The Iran deal also called as Joint Comprehensive Plan of Action was signed on July 14, 2015 between Iran, the U.S., China, France, Russia, the U.K., Germany and the European Union.
- It is a huge setback to multilateral diplomacy and the rules-based international order. The re-imposed sanctions will target critical sectors of Iran's economy, such as its energy, petrochemical, and financial sectors.

Botswana in International Solar Alliance

Botswana

- It is a republic, democratic and a landlocked country in Southern Africa.
- One-third of the country is covered by Kalahari Desert. Botswana is one of the most sparsely populated countries in the world. Around 10 percent of the population lives in the capital and largest city, **Gaborone**.
- Botswana is a member of the **African Union**, the **Southern African Development Community**, the **Commonwealth of Nations**, and the **United Nations**. The country has been among the hardest hit by the HIV/AIDS epidemic.

India and Botswana

- India has agreed for Botswana's request to impart Diplomatic training to Botswana's Junior Diplomats.
- The two nations have signed several agreements related to bilateral trade, taxation, cultural exchanges, and science and technology. Botswana is also a part of India's Pan African E-Network Project.
- India has promised of providing e-healthcare and e-learning technologies to Botswana.
- Both the countries are working on establishment of India-Africa Diamond Institute.

Why in News?

- During Vice-president Venkaiah Naidu's visit to Botswana, the host country has expressed their willingness to enter into ISA.

United Nations World Tourism Organization (UNWTO)

About

- The World Tourism Organization (UNWTO) is the United Nations agency responsible for the promotion of responsible, sustainable and universally accessible tourism.
- UNWTO encourages the implementation of the **Global Code of Ethics for Tourism**, to maximize tourism's socio-economic contribution while minimizing its possible negative impacts, and is committed to promoting tourism as an instrument in achieving the **Sustainable Development Goals (SDGs)**, geared towards reducing poverty and fostering sustainable development worldwide.
- UNWTO generates market knowledge, promotes competitive and sustainable tourism policies and instruments, fosters tourism education and training, and works to make tourism an effective tool for development through technical assistance projects in over 100 countries around the world.
- The UNWTO Executive Council represents the Organization's governing body whose task is to take all necessary measures in consultation with the Secretary-General, for implementation of its own decisions and recommendations of the Assembly and report thereupon to the Assembly. The Council meets at least twice a year, the next was held in Bahrain.

Why in news?

- Minister of State (Independent Charge) for Tourism, Shri. K. J. Alphons along with a delegation of senior officials is attended the 109th session of United Nations World Tourism Organization (UNWTO) Executive Council in Manama, Bahrain

Britain rejects Deepavali, Eid holidays

What's in News?

- The UK government has rejected the idea of declaring Diwali and Eid as national holidays saying that adding more public holidays will affect the country's economy
- An online petition was sent to the House of Commons Backbench Business Committee responsible for scheduling debates on e-

petitions that crossed 100,000. The petition attracted 121,843 signatures.

- Around 4.5% of the total population are Muslims and 1.5% is Hindus in the country. The government said that it can't provide a public holiday for smaller communities; this can be harmful for the economy.
- The majority of Britain's public holidays were secular and new ones should be justified on secular grounds.
- The Hindu Council UK had suggested the introduction of a floating framework whereby current fixed bank holidays could be exchanged for days when other religious festivals took place.

China all set to build permanent airport at the South Pole

Why in news?

- China will build the country's first permanent airport in the South Pole which will provide logistical support to scientists and enhance airspace management in the resource-rich Antarctic.

About the airport:

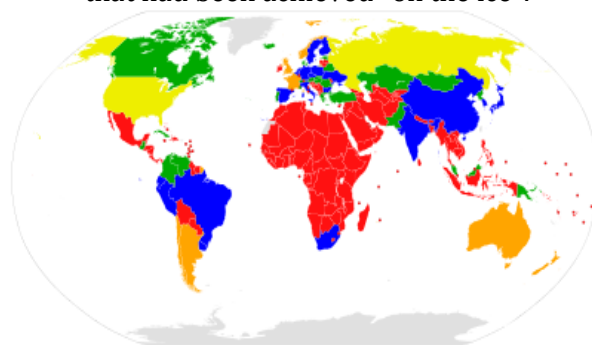
- China is joining the US, Russia, Britain, Australia and New Zealand among others in having airfields in the Antarctic, which is rich in natural resources such as silver, gold, platinum and coal.
- The establishment of the airport will also help China gain management authority of airspace over the South Pole.
- The airport will complete China's aviation security system in the Antarctic, including

the communications and meteorological support systems.

- There is no restriction to build any permanent airport in Antarctica. An only military activity in Antarctica is banned.

About the Antarctic Treaty System:

- The Antarctic Treaty and related agreements, collectively known as the Antarctic Treaty System (ATS), regulate international relations with respect to Antarctica.
- The treaty sets aside Antarctica as a scientific preserve, establishes freedom of scientific investigation, and bans military activity on the continent. The treaty was the first arms control agreement established during the Cold War.
- The treaty was a diplomatic expression of the operational and scientific co-operation that had been achieved "on the ice".



Parties with consulting status making a claim to Antarctic territory

Parties with consulting status reserving the right to make a territorial claim

Other parties with consulting status

Parties without consulting status

Non-party UN member states and observers

Science & Technology

IIT Guwahati uses Aloe Vera to remove oil from water

Why in News?

- Researchers have for the first time used a naturally occurring material- aloe Vera gel which inherently has superior oil repelling (oleo-phobic) property to separate oil from water.

About the Research

- Researchers have used the thick gel contained in the leaves of aloe Vera plant to convert a commercially available porous material that is oil-loving (oleophilic) to become extremely oil-repelling by coating it with the gel.
- Being porous and stretchable, the coated material acts as a membrane to separate oil and water. Since it is super-oleo-phobic (and therefore highly water-loving), the membrane allows water to pass through it thus helping in separating oil from water.
- The researchers were able to separate both light (kerosene) and heavy oil from water using the membrane.

Significance

- The membrane could be reused at least 25 times to separate light and heavy oil from water with the efficiency of separation remaining above 97%.

Bone marrow transplantation

What is Bone Marrow?

- Bone marrow is the spongy tissue inside some of the bones in the body, including the hip and thigh bones. Bone marrow contains immature cells, called stem cells.
- Bone marrow produces 200 billion new red blood cells every day, along with white blood cells and platelets.
- Bone marrow contains mesenchymal and hematopoietic stem cells.
- Mesenchymal stem cells are **multipotent stromal cells** that can differentiate into a variety of cell types, including osteoblasts (bone cells), chondrocytes (cartilage cells), myocytes (muscle cells) and adipocytes (fat cells which give rise to marrow adipose tissue).
- Hematopoietic stem cells (HSCs) are the stem cells that **give rise to other blood cells**. This process is called **haematopoiesis**. This process

occurs in the red bone marrow, in the core of most bones.

Why in News?

- National Centre for Cell Science (NCCS) has invented a novel way to multiply or expand the number of hematopoietic stem cells before transplantation.
- The procedure also improves the body's ability to accept the transplanted stem cells and begin producing new blood cells (engraftment potential).
- Increase in the engraftment potential improves the success rate of bone marrow transplantation.
- Treating hematopoietic stem cells with nitric oxide improved the engraftment potential of juvenile cells.

What are hematopoietic stem cells?

- Hematopoietic stem cells are found in the bone marrow they are also called blood stem cell.
- They are basically immature cells that can develop into all types of blood cells, including white blood cells, red blood cells, and platelets.

About the Research

- Researchers have found that treating hematopoietic stem cells with nitric oxide improved the engraftment potential of juvenile cells.
- In the latest study, the mesenchymal stem cells were with a nitric oxide-producing compound. These cells secreted micro-vesicles that were enriched in certain factors that have the ability to increase the engraftment potential of hematopoietic stem cells.

Significance

- The procedure improves the body's ability to accept the transplanted stem cells and begin producing new blood cells; this is termed as the engraftment potential.
- Increase in the engraftment potential improves the success rate of bone marrow transplantation.

India home to two new gecko species

Why in News?

- The spot-necked day gecko and the Anaimudi day gecko have been recently discovered.

Key Facts

- They are found only in the higher reaches of the Agasthyamalai and Annamalai hill ranges in the Western Ghats.
- The Anaimudi day Gecko has red iris, they were first spotted in Kerala's Shola National Parks in 2013
- Spot-necked day gecko was spotted at **Kollam's Shendurney Wildlife Sanctuary** which is part of the Agasthyamalai hill range in 2016. This gecko had bluish-white spots in a distinct 'necklace-pattern' on its nape.



Spatial Cells

Why in News?

- By studying the movement of virtual animals in computer simulation, a research team at IIT Madras has unlocked the navigation behaviour in rats moving in two dimensions.

Background

- Previous studies have shown that certain regions (hippocampus and para-hippocampus) in the rat brain contain special cells known as "spatial cells" that help to create a cognitive map for navigation.
- The 2014 Nobel Prize in Physiology or Medicine was awarded to three scientists who discovered cells that constitute a positioning system in the brain.
- The inner GPS in the brain or the neurons help in coordinating the position, distance and direction of travel.

About the Research

- Using mathematical models and computer simulations, the researchers looked at various spatial cells called "Grid Cells" and

"place cells" which get activated at different times and help in positioning and pathfinding.

Significance

- An understanding of the spatial navigation system in the brain can help in engineering automobiles, drones, and underwater vehicles.

World's smallest optical gyroscope

Why in News?

- Scientists have developed the world's smallest optical gyroscope.

What is an optical gyroscope?

- Gyroscope is device that helps in measuring and maintaining an orientation at a desired angular momentum.
- It consists of a wheel or disc mounted on a axis around which it spins rapidly and it is free to alter in direction.
- The orientation of the axis is not affected by tilting of the mounting, so gyroscopes can be used to provide stability or maintain a reference direction in navigation systems, automatic pilots, and stabilizers.
- Optical gyroscope is a device that helps vehicles, drones and handheld electronic devices know their orientation in 3D space. Such devices are based on the Sagnac effect, first demonstrated by French scientist Georges Sagnac in 1913.
- Sagnac effect in basic terms can be simply said as path difference observed in objects or beams due to the rotational motions of surfaces on which they move/attached.

What is the issue?

- The smallest high-performance optical gyroscopes available today are bigger than a golf ball and are not suitable for many portable applications.
- As optical gyroscopes are built smaller and smaller, so too is the signal that captures the Sagnac effect, which makes it more and more difficult for the gyroscope to detect movement.

The Recent Invention

- The new gyroscope achieves improved performance by using a new technique called "reciprocal sensitivity enhancement." In this case, "reciprocal" means that it affects both beams of the light inside the gyroscope in the same way.
- On the other hand Sagnac effect relies on detecting a difference between the two

beams as they travel in opposite directions, it is considered nonreciprocal.

India Mobile Congress (IMC) 2018

Why in News?

- IMC 2018, with its theme "New Digital Horizons Connect, Create, innovate" was held recently.

About IMC

- As South Asia's largest digital forum, the major objectives of IMC include -
 1. Promoting skilling, local manufacturing & entrepreneurship
 2. Attracting investments
 3. Driving Policy and Regulatory dialogue
 4. Supporting technology exports
 5. Encouraging R&D efforts in the ICT & TMT sector and
 6. Enhance digital cooperation not just across the South Asian region but across the world.

IMC 2018: Highlights

- The Government of India announced the commitment of the industry to roll out One Million Wi-Fi Hotspots in the Country by December 2019.
- The National Frequency Allocation Plan (NFAP) 2018 was also unveiled at the event. NFAP 2018 frees up a total of 605 MHz spectrum in the 5-GHz band for Wi-Fi services.
- Several spectrum bands for Short Range Devices and Ultra-Wideband Devices have been made license exempt, benefitting the public as well as industry.
- An interesting feature of this edition of the IMC was the focused attention on the critical Start-ups ecosystem which seeks to leverage the potential of digital communications to create and meet ever-changing consumer needs, in areas such as artificial intelligence, integrated services, healthcare, etc.

Taxi-Bots

Why in News?

- Delhi's Indira Gandhi International Airport is set to be the first airport in the country to commence commercial use of TaxiBots.

What are TaxiBots?

- It is a semi-robotic, pilot-controlled towing tractor. The vehicle tows the aircraft close to the take off point, without running engines. This process will be steered by the pilot.

Advantage

- It will help airlines reduce the use of air turbine fuel during taxiing. This can help airlines save jet fuel, one of the largest expenses for an airline, accounting for nearly 30% of total operational costs.
- It is also environment-friendly since it will help reduce CO₂-Emissions and reduce the use of fuel.

Parker Solar Probe

About Parker solar probe

- The purpose of the mission will be to study sun's outer atmosphere and to understand how sun works.
- It was launched on August 12, 2018 is on seven-year-long journey and expected to reach to closest to sun's surface just 6.12 million km from its surface.
- Its closer observation will help us to understand the determining the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.



Why in news?

- Recently Parker solar probe has set a new record for closest approach to the sun by a human-made object the U.S. space agency announced. The previous record for closest solar approach was set by the German-American Helios 2 spacecraft in April 1976.

Sterlite Industry & Pollution

Why in news?

- The Tamil Nadu Pollution Control Board on Sunday told the NGT-appointed expert committee that post-Sterlite closure, the ambient air quality has considerably improved around the factory in Thoothukudi. For instance, sulphur dioxide (SO₂) emissions have dropped four times from 20 micrograms per cubic metre to 5.

About Sterlite industry

- Sterlite operated the largest copper smelter plant in India, in Thoothukudi from 1998 to 2018. This plant was shut down by the Government of Tamil Nadu in

May 2018 after protests from locals but not operational from March 2018. The plant also included a refinery, a phosphoric acid plant and a sulphuric acid plant.

Controversies surrounding it

- Smelting plant has been long-opposed by the local residents for polluting their environment as well as causing a range of health problems and has been subject to several closures, on grounds of violating environmental norms.
- The National Environmental Research Institute (NEERI) and the TNPCB have found evidence that Sterlite contaminated the groundwater, air and soil with its effluents and also violated standards of operation.
- Even SC has fined the Sterlite Rs 100 cr for polluting the environment and operating without the approval of TNPCB.

Kepler space telescope

Why in news

- The Kepler space telescope has run out of fuel and will be retired after a 9-1/2-year mission in which it detected thousands of planets beyond our solar system and boosted the search for worlds that might harbour alien life.
- NASA has said, telescope currently orbiting the sun 94 million miles (156 million km) from Earth, the spacecraft will drift further from our planet when mission engineers turn off its radio transmitters.

About Kepler mission

- NASA had launched Kepler spacecraft in 2009 to explore for exoplanets (planets lay outside the solar system).
- Kepler used a detection method called transit photometry, which looked for periodic, repetitive dips in the visible light of stars caused by planets passing, or transiting, in front of them.



Significance

- During its mission, Kepler found 2,681 confirmed planets and another 2,899

candidates, bringing its tally to 5,580. That number includes about 50 that may be about the same size and temperature as Earth.

- Kepler's data also provided a new way to assess whether a planet had a solid surface, like Earth and Mars, or is gaseous, like Jupiter and Saturn. The distinction helped scientists zero in on potential Earth-like planets and better the odds for finding life.
- Kepler was succeeded by NASA's Transiting Exoplanet Survey Satellite, or TESS, which was launched in April.

Vehicle Location Tracking

Why in news?

- The Ministry of Road Transport & Highways has mandated that all new public service vehicles except auto rickshaws and e-Rickshaws, registered on and after 1st January 2019, will have to be equipped with Vehicle Location Tracking (VLT) with emergency buttons.
- This regulation is being brought in to ensure safety of passengers especially women.

How it works?

- Command and Control Centres will be setup by the State or VLT manufacturers, and these centres will provide interface to Responsible agencies.
- These centres will also provide feed to the VAHAN data base or the relevant data base of the State with regard to the over speeding, device health status.
- The public service vehicle owners have to ensure that the VLT devices installed in their vehicles are in working condition and regularly send required data to the corresponding backend system through cellular connectivity.

Coconut oil as insect repellent

Why in news?

- A study found that coconut oil is much more effective insect repellent than the existing repellents.

More on the news

- Compounds derived from coconut oil are better than DEET at preventing disease transmission and discomfort associated with insect bites, according to a study.
- Diethyl-meta-toluamide, also called DEET or diethyltoluamide, is the most common

active ingredient in insect repellents. It is slightly yellow oil intended to be applied to the skin or to clothing and provides protection against mosquitoes, ticks, fleas, chiggers, leeches and many biting insects.

- For more than 60 years, DEET has been considered the gold standard in insect repellents, the most effective and long-lasting available commercially.
- The coconut oil-derived free fatty acid mixture like lauric acid, capric acid and caprylic acid as well as their

corresponding methyl esters which provides strong repellence against blood-sucking insects.

- Against bed bugs and ticks, DEET lost its effectiveness after about three days, while the coconut oil compound lasted for about two weeks, the study found.
- Coconut oil fatty acids also provided more than 90% repellence against mosquitoes including *Aedes aegypti*, the mosquito that can transmit the Zika virus.

Defence & Security

Dornier Aircraft

What it is?

- The aircraft is a lightweight with a wide range of operating speeds and the fuel efficiency uniquely made to operate from smaller airfields.
- The Dornier 228 has quick role changing capability including Maritime Patrol & Surveillance; Pollution Contingency; Search & Rescue; and Medical Evacuation.
- Hindustan Aeronautics limited holds the license to locally produce the Dornier-228 aircraft.



Why in News?

- The Defence Acquisition Council (DAC) approves the state of art technological upgrade of 17 Dorniers Aircraft of Indian Coast Guard (ICG). Such an upgrade will be carried out by the Hindustan Aeronautics Limited (HAL).

What are the Advantages?

- The approval of this aircraft with state-of-the-art technology, spares, Special Maintenance Tools (SMT) and Special Test Equipment (STE) is further strengthen the fleet keeping to faces the ICG emerging challenges in water.
- The upgrade allows the new state-of-art equipment such as surveillance radar, pollution surveillance system, satellite communication etc. to be fitted on-board as per the request of Indian Navy.

About Indian Coast Guard (ICG):

- ICG is a nodal agency for maritime pollution response and its primary role is to protect the National interests in maritime zones of India, which entails the surveillance of sea areas of India's exclusive Economic Zone (EEZ).
- The Coast Guard has Dornier 228 of twin-engine turboprop, highly versatile multi mission maritime patrol aircraft. ICG also has a fleet of Dornier aircraft has a major

role to play in the maritime surveillance too.

Humanity at Risk

Why in news?

- According to 'Humanity at Risk - Global Terror Threat Indicant report', Pakistan is placed on top of the list of countries with the highest number of terrorist bases and safe havens.

What report says?

- Pakistan is placed on top of the list of countries with the highest number of terrorist bases and safe havens to Afghan Taliban and Lashkar-e-Taiba which poses the maximum threat to international security.
- The significant number of terrorist groups based in Afghanistan was operating with the support of Pakistan.
- Terrorism interlinked with the rise of competitive extremism of all shades, misuse of weapons of mass destruction and economic disruptions can undermine human progress.
- Most of the world's terrorist groups are motivated by their own interpretation of ideology.

About 'Humanity at Risk - Global Terror Threat Indicant report':

- The report has been prepared jointly by the Oxford University and Strategic foresight Group to discuss the security challenges in the next decade, presents an analytical framework for policymakers to tackle terrorism.

Implication to India

- In Pakistan, most of the terror groups are based in Pakistan occupied Kashmir (POK), Quetta and Baluchistan, Punjab and Sindh, which are close to Indian border.
- The Pakistan terrorist group has helping the several banned terrorist organization which are unhappy with Indian government like ULFA in Assam, thus threatening internal security.
- They pose challenges to Indian security forces in maintaining the peace and stability in border and sensitive areas especially in Kashmir valley.

INS Tarangini

What is INS Tarangini?

- INS Tarangini is a three masted 'square rigged' barque which carries a total of 20 sails. She is the First Sail Training Ship in Indian Navy and was commissioned on 11 Nov 1997.
- She is the first of two Sail Training Ships in the First Training Squadron, the other being INS Sudarshini.
- The primary role of these Sail Training Ships is to develop character and professionalism, as well as inculcate the qualities of initiative, courage, resilience and esprit-de-corps amongst the Sea Trainees and also impart practical training to them, primarily on navigation, sailing and seamanship.
- INS Tarangini has been extensively deployed for long voyages away from her base port of Kochi, which includes one circumnavigation of the globe (2003-04) and three previous 'Lokayans' (2005, 2007 and 2015).



Why in news?

- The sail training ship of Indian Navy, INS Tarangini based at Kochi, returned after a seven month long "Lokayan 18" voyage across the world, Kochi on 30 Oct 18.

About Lokayan 18:

- Lokayan 18 was voyage made by the INS Tarangini , which flagged off on 10 April 2018 from Kochi, during voyage, the Ship proudly shown the flag and highlighted the diverse culture of India across 15 ports in 13 countries.
- The voyage of the ship sailed across the Arabian Sea, Red Sea, Suez Canal, Mediterranean Sea, Strait of Gibraltar, North Atlantic Ocean, Bay of Biscay, English Channel and North Sea, right up to Norway before commencing her homeward passage back to Kochi.
- In course of voyage ship also participated in the culminating event of the 'Three Festival Tall Ships Regatta' at Bordeaux, France. As well as the 'Tall Ships Races Europe 2018' which started at Sunderland, UK and touched Esbjerg, Denmark and Stavanger, Norway before finishing at Harlingen, Netherlands.

Environment

Green firecrackers

What are green firecrackers?

- Green firecrackers are defined as those which avoid harmful chemicals and, in the manufacturing process, avoid the use of ash, which contributes to particulate matter emissions when burnt.
- It **should not contain** barium, lithium, arsenic and lead and as much as possible reduce the presence of aluminium.

Why in news?

- The green firecrackers developed by Council of Scientific and Industrial Research (CSIR) are unlikely to come to markets this Diwali.

Current status

- The green firecrackers developed are pending approval from Petroleum and Explosives Safety Organisation (PESO), which is the nodal agency for safety requirements in manufacture, storage, transport and use of all types of explosives and petroleum.

About the green firecrackers

- The crackers developed by Council of Scientific and Industrial Research (CSIR) have been named as safe water releaser (**SWAS**), safe minimal aluminium (**SAFAL**) and safe thermite cracker (**STAR**).
- It has unique property of releasing water vapour and /or air as dust suppressant and diluent for gaseous emissions and matching performance in sound with conventional crackers.
- SWAS crackers eliminates the usage of (KNO₃) potassium nitrate and sulphur with consequent reduction in particulate matter (30-35%) SO₂ and NO_x
- STAR eliminates the usage of KNO₃ and S with consequent reduction in particulate matter (35-40%), SO₂ and NO_x.
- SAFAL has minimal usage of aluminium (only in flash powder for initiation) with consequent significant reduction in particulate matter (35-40 %) compared to commercial crackers.
- Functional prototypes of flower pots for substitution of BaNO₃ (Barium nitrate) have been developed by using low cost eco-friendly materials with significant reduction in particulate matter (30-35%).

Advantages of green firecrackers

- Less polluting
- 15-20% cheaper than conventional firecrackers

Initiatives

- An Emission testing Facility has been established at CSIR-NEERI for the first time to test and monitor the emissions and sound from conventional and green crackers.
- A raw material characterization facility is also coming up as it has been found that poor quality raw materials is major cause for particulate matter pollution.

Only green Crackers in Delhi

- SC has said that in Delhi only Green crackers must be used for this Diwali. Other states are free to use the existing crackers but from now on only green crackers are to be manufactured in the country.
- SC has banned online sale of crackers through e-commerce websites. The sale of green and improved crackers would be only through licensed traders.
- The court had fixed a uniform slot for bursting crackers across the country. During Deepavali and other religious festivals, the slot is between 8 p.m. and 10 p.m. But states can fix their own 2-hour time slot.

Pyrotechnic industry and green firecrackers

- Supreme Court order banned all firecrackers that were not 'green'. The order, in one stroke, made entire cracker industry in India's fireworks manufacturing hub, illegal.
- There are issues over the R&D over green firecrackers
 1. Institutional confusion - Who's responsibility i.e CSIR-NEERI ,Private study by individual manufacture or association, Role of PESO in this?
 2. Lack of trust between MOEF&CC and manufacturers and not taking other agencies into confidence during the research on green crackers.
 3. Who will further provide financial resources for the R&D?
- Complete ban on critical elements such as barium salts without completely understanding their role in combustion process would hurt the industry.

- Buyers and traders are now confused by the court's order, especially as dispatches are made on a part-cash, part-credit basis. After the payment of the Goods and Services Tax it has become complex.
- Industry may not be able to secure the material available in testing laboratory in a industry scale.

Urban Cafe: River for Habitat

Why in News?

- The National Mission for Clean Ganga partnered with UN Habitat to organize a policy dialogue- 'Urban Cafe: River for Habitat' in New Delhi on the occasion of World Cities Day 2018 on 31st Oct.
- The experts sat to discuss the river pollution and their effect on the different aspects of the country.
- Flood plain encroachments, developing city-specific urban management plan, valuation of river services in economic terms, preserving biodiversity in Ganga, maintaining groundwater recharge, NMCG's collaboration and convergence with all stakeholders and engaging public participation are the problems they discussed.

UN-Habitat

- Mandated by the UN General Assembly in 1978 to address the issues of urban growth, it is a knowledgeable institution on urban development processes, and understands the aspirations of cities and their residents.
- For forty years, UN-Habitat has been working in human settlements throughout the world, focusing on building a brighter future for villages, towns, and cities of all sizes

Save Bandipur

Bandipur Tiger Reserve

- Once hunting grounds of Mysore kingdom, Bandipur was brought under project tiger in 1973
- Bandipur Tiger Reserve lies in one of the richest biodiversity areas of our country representing "5 B Western Ghats Mountains Biogeography Zone", surrounded by Mudumalai Tiger Reserve in the South, Wayanad Wildlife Sanctuary in the South West & on the North West Side the Kabini Reservoir separates the Bandipur and Nagarahole

Tiger Reserve. The Northern side of the Tiger Reserve is surrounded by human dominated landscape with villages and agricultural lands.

- Most famous for its elephants and tigers, Bandipur is also known for its large gaur and chital populations.
- The Bandipur Tiger Reserve along with Nagarahole, Mudumalai, Sathyamangalam & Wayanad Landscape is the source population in the Western Ghats landscape complex with an estimated Tiger population of about 382 (354-411), constitutes the single largest wild population of tigers in the world.

Why in News?

- A protest was held at the Maddur range check post of **Bandipur Tiger Reserve** and drew activists from Bengaluru, Mysuru, Gundlupet, and Kerala.

Background

- The campaign was launched against the request sent by Union Ministry of Roads Transport and Highways (MoRTH) to apex court of its plan to construct five elevated highways through the national park, besides opening it up for road traffic 24x7.
- Presently there is a ban on night traffic through the park from 9 p.m. to 6 a.m. as a measure to reduce roadkill and it was upheld by the High Court of Karnataka.
- The protesters argue that lifting the night ban will be harmful to forests and wildlife, pointing out that there have been innumerable deaths of wild animals owing to traffic accidents, especially tigers.
- Many cautioned that the project would ring a death knell to forests which are a source of water.

National Innovations on Climate Resilient Agriculture (NICRA)

- The mega project has launched in 2011, by Indian council of Agricultural Research (ICAR) has three major objectives of strategic research, technology demonstrations and capacity building.
- Assessment of the impact of climate change simultaneous with formulation of adaptive strategies is the prime approach under strategic research across all sectors of agriculture, dairying and fisheries.
- Under the programme, around 150 villages from districts of the country are

being assessed of climate change on agriculture

Why in News?

- The Union Minister of Agriculture and Farmers' Welfare, Shri Radha Mohan Singh addressed Inter – Session Meeting of Consultative Committee of the Ministry of Agriculture & Farmers Welfare. He appreciated the work done by ICAR under NICRA.
- The Minister emphasised that there is a need to bring convergence of these programmes at the village level so as to enhance the adaptive capacity of communities to effectively address the concerns of climate change. The minister suggested a name 'Integrated Climate Resilient Agriculture Programme (INCRAP).

Living Planet Report 2018

What is Living Planet Report?

- The Living Planet Report is published every two years by the **World Wide Fund (WWF)** for Nature since 1998.
- The report provides an analysis of the health of our planet and the impact of human activity.
- It also provides comprehensive study of trends in global biodiversity

Why in news?

- The Living Planet Report 2018 was released and for the **first time soil biodiversity** has been added to the report. A Global Soil Biodiversity Report has been prepared by WWF.

Highlights from the Living Planet Report 2018

- The main drivers of biodiversity decline continue to be the overexploitation of species, agriculture and land conversion
- Two recent studies have focused on the dramatic reductions in bee and other pollinator numbers and on the risks to soil biodiversity, critical to sustain food production and other ecosystem services.
- Changing land use due to agricultural intensification and urban expansion is one of a number of key drivers of pollinator loss
- A recent assessment found that only a quarter of land on Earth is substantively free of the impacts of human activities. This is projected to decline to just one tenth by 2050.

- Land degradation includes forest loss; while globally this loss has slowed due to reforestation and plantations it has accelerated in tropical forests that contain some of the highest levels of biodiversity on Earth.
- Almost 6 billion tonnes of fish and invertebrates have been taken from the world's oceans since 1950
- Plastic pollution has been detected in all major marine environments worldwide, from shorelines and surface waters down to the deepest parts of the ocean
- Freshwater habitats, such as lakes, rivers and wetlands, are the source of life for all humans yet they are also the most threatened, strongly affected by a range of factors including habitat modification, fragmentation and destruction; invasive species; overfishing; pollution; disease; and climate change.
- The latest index shows an overall decline of 60% in population sizes between 1970 and 2014. Species population declines are especially pronounced in the tropics, with South and Central America suffering the most dramatic decline, an 89% loss compared to 1970.
- Freshwater species numbers have also declined dramatically, with the Freshwater Index showing an 83% decline since 1970.
- Since 1960, the global ecological footprint has increased by more than 190%.
- Globally, the extent of wetlands was estimated to have declined by 87% since 1970.

Steps to be taken

- Clearly specifying a goal for biodiversity recovery
- Developing a set of measurable and relevant indicators of progress
- Agreeing on a suite of actions that can collectively achieve the goal in the required time frame

Global Soil Biodiversity Atlas

- Global Soil Biodiversity Atlas maps for the first time potential threats to soil biodiversity across the globe were released recently.
- It has been prepared by the World Wide Fund for Nature
- Soil biodiversity encompasses the presence of micro-organisms, micro-fauna (nematodes and tardigrades for example),

and macro-fauna (ants, termites and earthworms).

- A risk index was generated by combining eight potential stressors to soil organisms: loss of above-ground diversity, pollution and nutrient overloading, overgrazing, intensive agriculture, fire, soil erosion, desertification and climate change.
- India is among the countries whose soil biodiversity faces the highest level of risk (red colour).
- Other countries which are coloured red on the Atlas include Pakistan, China, several countries in Africa and Europe, and most of North America.

Moths as Pollinators

Why in news?

- A recent study by scientists of Zoological survey of India (ZSI) has revealed that group of moths are pollinators to a number of flowering plants in the Himalayan ecosystem.

Background:

- Moths are widely considered as pests. A recent study has revealed that this group of insects is pollinators to a number of flowering plants in the Himalayan ecosystem.
- Usually bees, wasps and butterflies are considered as prominent pollinators.
- About 90% of the world's flowering plants are pollinated by animals. Therefore, pollinators are essential for the genetic exchange among flowering plants and the biodiversity among plants.

More about the study

- Under the project titled “**Assessment of Moths (Lepidoptera) As Significant Pollinators in the Himalayan Ecosystem of North Eastern India**”, scientists collected moth samples from different ecosystem in states like Arunachal Pradesh, Sikkim and West Bengal.
- Most of the studies on plant pollinator's network are focused on diurnal interactions between the insects and plants. This particular study is based on plant- moth interactions, as a nocturnal phenomenon.
- The analysis of proboscis, a long and thread-like organ used to suck flower sap, shows a dozen moth species such as Erebidae and Sphingidae, were found to

contain pollen of several flowering plants, including Rhododendron.

- On observing the proboscis under scanning electron microscope, it was observed that structures of moths are not only meant for sap-sucking, but are morphological designed for pollination.

Status of Moths:

- Moths comprise a group of insects related to butterflies, belonging to the order Lepidoptera. Most lepidopterans are moths, and there are thought to be approximately 160,000 species of moth, many of which have yet to be described.
- Almost two-thirds of common large moth species have declined over a period of 40 years in many parts of the world due to decline is the increase in ecological light pollution, especially in areas inhabited by moths.

Status of Pollination in Himalaya's

- A study by the International Centre for Integrated Mountain Development (ICIMOD) on pollination in Himalayan agriculture, highlight the importance of pollinators and pollination services and concluded that the countries of Himalayan region must include provisions for management and conservation of pollinators in their agricultural policies to improve the food security and livelihoods of farmers.

5th dedicated R&D centre for bioenergy

Biofuels

- Biofuel, any fuel that is derived from biomass—that is, plant or algae material or animal waste.
- These are divided into 3 generations.
- **1st Generation** - the source of carbon for the biofuel is sugar, lipid or starch directly extracted from a plant. The crop is actually or potentially considered to be in competition with food.
- **2nd Generation** - the biofuel carbon is derived from cellulose, hemicellulose, lignin or pectin. For example this may include agricultural, forestry wastes or residues, or purpose-grown non-food feedstocks (e.g. Short Rotation Coppice, Energy Grasses).
- **3rd Generation** - the biofuel carbon is derived from aquatic autotrophic organism (e.g. algae). Light, carbon dioxide

and nutrients are used to produce the feedstock "extending" the carbon resource available for biofuel production. This means, however, that a heterotrophic organism (using sugar or cellulose to produce biofuels) would not be considered as 3G.

Advanced Bio-fuels

- They are second generation biofuels.
- Advanced Biofuels are those:
 1. Produced from lignocellulosic feedstocks (i.e. agricultural and forestry residues, e.g. wheat straw/corn Stover/bagasse, wood based biomass), non-food crops (i.e. grasses, miscanthus, algae), or industrial waste and residue streams,
 2. Having low CO₂ emission or high GHG reduction, and
 3. Reaching zero or low ILUC impact (Indirect Land use change impact)
- The aim is to produce biofuels with advanced properties from sustainable feedstocks that are not considered to compete adversely with food production systems, or lead to loss of stored carbon through deforestation.

The Energy and Research Institute (TERI)

- Established in 1974, The Energy and Resources Institute (TERI), New Delhi is a research institute that conducts research work in the fields of energy, environment and sustainable development.
- The scope of the organisation's activities includes climate change, energy efficiency, renewable energy, biotechnology, and social transformation.

Why in News?

- The Department of Biotechnology (DBT) has signed deal with TERI to set up a centre to produce "advanced biofuels and bio-commodities."
- It is 5th dedicated centre for bioenergy research and development. It will not only focus on R&D but also in commercialising the products.

Environment health profile project

About the project

- Environment health profile project is a project to evaluate the quantum of health effects arising from environmental exposure.

- It is being conducted by the Ministry of Environment and Forests.
- The study is a three year programme which will look at patients admitted for acute diseases at selected hospitals.
- The project will be conducted across 20 cities which will be divided into 4 zones and each zone will have 5 cities among which one will be a referral city.
 1. Referral city – cities where the pollution levels are not very high
 2. Test city – cities where the pollution levels are high

Why in news?

- The Ministry of Environment and Forest will conduct a study to evaluate the health effects of environment exposure.

Air quality index

What is Air Quality Index?

- Air Quality Index is a tool for effective communication of air quality status to people in terms, which are easy to understand.
- It transforms complex air quality data of various pollutants into a single number (index value), nomenclature and colour.
- There are six AQI categories, namely Good + Satisfactory, Moderately polluted, Poor, Very Poor and Severe.
- The 8 pollutants based on which they are calculated are PM₁₀, PM_{2.5}, NO₂, SO₂, CO, O₃, NH₃, and Pb.

Why in news?

- Delhi's air quality index had dropped to "severe" level.
- It is mainly due to agricultural waste burning around the neighbouring states of Punjab, Haryana and reduction in the wind speed.
- Various health issues such as irritation in the eyes and throat, dry skin, skin allergy, chronic cough and breathlessness are due to high pollution levels.

Environment Pollution Control Authority

- EPCA is Supreme Court mandated body tasked with taking various measures to tackle air pollution in the National Capital Region.
- It was notified in 1998.
- It helps in Protecting and improving the quality of the environment and controlling the environmental pollution in the National Capital Region.

- It takes all necessary steps to for controlling vehicular pollution, ensuring compliance of fuel quality standards, monitoring and coordinating action for traffic planning and management.

EPCA Guidelines

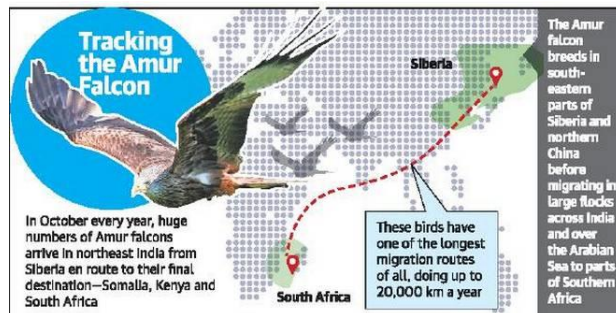
Pollution level	Steps to overcome
Moderate, poor	stop garbage burning in landfills, Strict imposition of pollution control regulations in brick kilns, thermal plants, sprinkling of water in unpaved roads.
Very Poor	Stop use of diesel generator sets, Stop use of coal/firewood, Increase the frequency of Public Transport Service.
Severe	Close brick kilns, Stone Crushers Increase frequency of mechanized cleaning of road and sprinkling of water on roads.
Severe+Emergency	Stop entry of truck, construction and introduce odd or even scheme.

Amur falcons

About Amur falcons

- They are the longest travelling raptors in the world. It breeds in south-eastern Siberia and Northern China before migrating in large flocks across India and over the Arabian Sea to winter in Southern Africa.
- The Amur Falcon exemplifies the threat of illegal trapping and killing during migration, which harms countless bird species each year. Amur Falcons are also prone to habitat loss from agricultural practices and land reclamation.

Migratory path



Why in news?

- Umru Village which witnessed to the dispute in Assam-Meghalaya border are forgotten when the village welcome the falcons in mid- October, uniting to ensure a safe stay for the birds.
- There is a active cooperation of native people in safeguarding their stay and passage and protecting their habitat, One such group called Tyrso Valley Wildlife Protection Society is an NGO has been organising the Amur Falcon Festival since 2015 to celebrate the “birds that have made this back of beyond area famous”.
- The Doyand Lake in Nagaland is set to develop as an eco-tourism spot for bird-watchers. Amur falcons come to roost at Doyang Lake in Wokha district of Nagaland every year, during their flight from Mongolia to Africa.
- Until recently, Naga tribesmen used to hunt thousands of Amur falcons for meat. But, after a vigorous campaign by wildlife activists, they have pledged to protect the bird and since then, not a single bird has been hunted in the area

1st WHO Global Conference on Air Pollution & Health

Overview of Conference

- The conference is being held in collaboration with UN Environment, World Meteorological Organization (WMO), UN Framework Convention on Climate Change (UNFCCC), the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) and the United Nations Economic Commission for Europe (UNECE).
- It was held at WHO Headquarters in Geneva.
- Participants of the conference will include Ministers of Health and Environment and representatives of intergovernmental agencies, health professionals etc

- Theme of the conference: Improving air quality, combating climate change – saving lives

WHO report on Air pollution and child health

- The report on air pollution and child health released on the eve of the WHO's first ever global conference on Air Pollution and Health.
- The report says that almost 93% of the world's children under the age of 15 breathe polluted air that seriously affects their health.
- These children are subjected to various diseases such as asthma, childhood cancer, cardiovascular diseases etc
- Household air pollution from cooking and outside air pollution are the major causes for respiratory infections in children.

Actions to be taken

- WHO is supporting the process of switch to clean cooking and heating fuels and technologies, promoting the use of cleaner transport, energy-efficient housing and urban planning.
- Governments should adopt necessary measures to reduce the over-dependence on fossil fuels and make investments in renewable energy sources.
- Appropriate steps must be taken to have Schools and playgrounds away from major sources of air pollution like busy roads, factories and power plants.

Assault on Aravallis

Why in news?

- Supreme Court reprimanded the Rajasthan government for its failure to check illegal mining in an over 100-hectare range of the Aravalli mountains.
- SC referred to a report of the Central Empowered Committee (CEC) the body that advises it on forest related matters which pointed out that 31 of the 128 hills in the Aravallis have vanished.

About Aravalli hills

- It is the oldest fold mountain ranges in India which stretching about 300 miles from the northeast to the southwest. The length of the Aravallis is about 1100 km which extends from Delhi to Ahmedabad.
- Guru Shikhar is the highest point which is located in Mount Abu. The Aravalli range is very rich in natural resources and gave rise of numerous peninsula rivers like Banas, Luni, Sakhi, and Sabarmati.

Critical importance of Aravalli

- The Aravallis have played a major role in shaping the terrain of large parts of north-western India.
- Its hills have moderated the velocity of winds that blow towards North India and resisted the advance of the Thar Desert towards the fertile Indo-Gangetic plain.

Implication of the degradation of Aravalli

- Studies have pointed out that the denudation of the hills is leading to the drifting of desert sands towards the plains.
- Wildlife Institute of India pointed out that the shrinking green cover in the Aravallis is a major reason for the increase in the intensity of dust storms in the Indo-Gangetic plains.
- Even the two judge-benches observed that the loss of the hills could be a reason for the rising pollution levels in the National Capital Region (NCR).

Opening ISA memberships to all

Why in news?

- Cabinet approves moving a resolution in the first assembly of the International Solar Alliance (ISA) for amending the Framework Agreement of the ISA for opening up the ISA membership to all countries that are members of the United Nations.
- Botswana announced their decision to join the International Solar Alliance.

What will be intended benefits of the move?

- Opening the membership of the ISA will put solar energy in global agenda with the universal appeal for developing and deploying solar energy.
- It will make ISA inclusive, whereby all member countries that are members of the United Nations could become member.
- Expanding membership will lead to ISA initiative benefitting the world at large.

About ISA

- The International Solar Alliance (ISA) is an alliance of more than 121 countries initiated by India, most of them were sunshine countries, which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn but with this cabinet's move all UN members are eligible to be part of ISA.
- Primary objective- To build infrastructure around globe for a deployment of over 1,000GW of solar generation capacity and

mobilisation of investment of over US\$ 1000 billion into solar energy by 2030.

- ISA Framework Agreement entered into force on December 6th, 2017, ISA formally became a only International Intergovernmental Organization, headquartered in India at Gurugram.

10-Day Clean Air Campaign

Why in news?

- An aggressive ten day long Clean Air Campaign from 01st to 10th November, 2018 was launched today in Delhi by MoEF&CC.
- To monitor and report polluting activities as well as to ensure quick action, 52 teams working jointly with union and government of Delhi.

About Delhi air pollution

- The air quality in Delhi, the capital of India, according to a WHO survey of 1600 world cities, is the worst of any major city in the world.
- The Delhi-NCR faces with difficult situation each winter when air pollution levels goes up out of control. Last year, the day after Diwali, air pollution levels were recorded at eight times the safe limit, in Delhi.

Causes of poor air quality

- Motor vehicle emissions are one of the causes of poor air quality. Other causes include wood-burning fires, fires on agricultural land, exhaust from diesel generators, dust from construction sites, and burning garbage and illegal industrial activities in Delhi.
- The Badarpur Thermal Power Station, a coal-fired power plant built in 1973, is another major source of air pollution in Delhi. Despite producing less than 8% of the city's electric power, it produces 80 to 90% of the particulate matter pollution from the electric power sector in Delhi.

- Although Delhi is kerosene free and 90% of the households use LPG for cooking, the remaining 10% uses wood, crop residue, cow dung, and coal for cooking.
- Agricultural stubble burning in neighbouring states also affects Delhi's air quality when crops are being harvested.

India's lone active volcano

Why in news

- India's live volcano in the Andaman and Nicobar islands is erupting once again.
- After lying dormant for 150 years, Barren Island volcano had erupted in 1991 and since then it is showing sporadic activity. Now it is erupting in small episodes of five to 10 minutes. Satellite images confirm the event.

About Barren island volcano

- The volcanic island is part of Andaman Islands. Its northern part is barren and is uninhabited. It is also devoid of vegetation.
- Located 135 km northeast of Port Blair in Andaman Ocean, stands on the seismically active Indian and Burmese plate.
- Estimated to be 1.8 million year old, first massive eruption took place in 1787.

Map



Reasons for current eruption

- Geologists say recent eruption can be linked to recent earthquake in Indonesia. Indian National Centre for Ocean information services Hyderabad can confirm seismic activity in the region.

Culture

Statue of Unity

Sardar Vallabhbhai Patel:

- Vallabhbhai Patel was born on October 31, 1875 in Nadiad village of modern-day Gujarat.
- He completed his law degree in 1913 from Inns of Court and came back to India to start his law practice in Godhra, Gujarat.
- In 1917, Sardar Vallabhbhai was elected as the Secretary of the Gujarat Sabha, the Gujarat wing of the Indian National Congress. In 1918, he led a massive "**No Tax Campaign**" that urged the farmers not to pay taxes after the British insisted on tax after the floods in Kaira.
- In 1928, the farmers of Bardoli again faced a problem of "**tax-hike**". After several rounds of negotiations by Patel, the lands were returned to farmers after a deal was struck between the government and farmers' representatives. After this for his leadership skills, Mahatma Gandhi gave him title of 'SARDAR'.
- In 1930, Sardar Vallabhbhai Patel was among the leaders imprisoned for participating in the famous Salt Satyagraha movement initiated by Mahatma Gandhi. His inspiring speeches during the "Salt Movement" transformed the outlook of numerous people, who later played a major role in making the movement successful.
- Patel was elected as the President of Indian National Congress in its Karachi session where the party deliberated its future path. Congress committed itself towards defence of fundamental and human rights. It was in this session that the dream of a secular nation was conceived.
- Patel went on to work on a solution with V.P. Menon, a civil servant during December 1946 and accepted his suggestion of creating a separate dominion based on religious inclination of states. He represented India in the Partition Council.
- After suffering a massive heart attack, on 15 December 1950, the great soul left the world.
- He was posthumously conferred the Bharat Ratna, India's highest Civilian honour, in 1991.

The unifier of modern India

- After India achieved independence, Patel became the first Home Minister and also the Deputy Prime Minister. He played a very crucial role by successfully integrating

around 562 princely states under the Indian Dominion.

- What makes the merger of the princely States truly incredible is the fact that the princely rulers had the option at that time to either accede to India or Pakistan or remain independent. Yet, Patel's persuasive powers enabled him to integrate them under the Indian Dominion without triggering any kind of revolt or civil unrest.
- However, he was also compelled to use coercion by launching '**Operation Polo**' to liberate and integrate Hyderabad after the Nizam of Hyderabad entertained false hopes of either joining Pakistan or remaining independent. The complicated case of Junagarh, Gujarat, was also handled with dexterity by Patel.
- Hailing Patel's feat, Lord Mountbatten, the last Viceroy of India, had said: "By far the most important achievement of the present government is the unification of the States into the Dominion of India. Had you failed in this, the results would have been disastrous."

Architect of the steel frame

- The Iron Man of India was the chief architect of the modern-day IAS institution in place of the British-era Indian Civil Services (ICS), which he famously called the "Steel frame of India".
- The National Police Academy located in Hyderabad, Telangana, is named after him, as a tribute to the statesman.

What's in News?

- Prime Minister Narendra Modi has inaugurated a 182-metre statue of Sardar Vallabhbhai Patel on his 143rd birth anniversary.
- The '**Statue of Unity**', described as the world's tallest, was designed by Padma Bhushan-winning sculptor Ram V Sutar.
- PM Modi in his Mann Ki Baat has hailed Sardar Patel for his contribution and vision of uniting India into one India. He also said that it is Sardar Patel's courage to send Indian troops in Jammu and Kashmir in 1947 which saved the Valley from the clutches of "aggression".
- To commemorate the 143rd birth anniversary of Sardar Patel 'Run for unity' was organised in various parts of the country.

Delhi Durbar Painting

Delhi Durbar 1903

- As a part of visual demonstration of British Imperial rule Delhi durbar was convened thrice during 1877, 1903 and 1911.
- The Delhi durbar conducted in 1903 was presided over by Viceroy George Curzon.
- It was during this occasion Edward VII and Queen Alexandra were declared as the Emperor and Empress of the country.

The Painting

- A painting was commissioned about Delhi durbar 1903 by the British government, which was painted by British artist Roderick Mackenzie.
- The painting was named as “**State Entry into Delhi**”, shows Lord Curzon and other Indian kings.

Why in news?

- Few years ago, the painting which was kept in Victoria memorial hall in Kolkata was damaged due to termite attack.
- The painting has now been restored after a 2-year effort by the artists.

Veer Surendra Sai

Why in news?

- The Union Cabinet chaired by Prime Minister Shri Narendra Modi has approved renaming of Jharsuguda Airport, Odisha as “Veer Surendra Sai Airport, Jharsuguda”.

About Veer Surendra Sai:

- Veer Surendra Sai is a well-known freedom fighter of Odisha.
- Surendra Sai was an Indian freedom fighter and tribal leader who sacrificed his life fighting against the British East India Company.
- Sai espoused the cause of the downtrodden tribal people in Sambalpur by promoting their language and culture in response to the higher castes and the British trying to exploit them to establish their political power in Sambalpur region.
- He began protesting the British at age 18 in 1827, moved operations to the hilly tracts of Western Odisha in 1857 and continued until he surrendered in 1862 and went to Hazaribagh Jail.
- Before his surrender he spent 17 years in prison and after his final arrest served a term of 20 years including his detention of 19 years in the remote Asirgarh hill fort until he died.

Naga Club

Why in news?

- Kohima, the only theatre of the Second World War in the Indian subcontinent, is gearing up for the centenary of an ethnic club moulded by events during the First World War in faraway France.
- But the Nagaland capital is divided over who has the right to celebrate the special day of the club that unified disparate Naga tribes and laid the foundation of an armed movement for secession from India.
- The stand-off is between the influential Naga Students’ Federation (NSF) and members of the 100-year-old Naga Club. The NSF doubts the credibility of the members since the Naga Club of 1918 became dormant in 1982, while the latter say the students’ body should not dictate terms just because it “took over” the club building in 1983.
- The club building is not far from the landmark Kohima War Cemetery, an iconic reminder of a fierce battle in 1944 between the British-led Allied forces and the Japanese army alongside Subhas Chandra Bose’s Indian National Army.

Background:

- The British government had during the First World War recruited 2,000 labourers and porters from some 15 Naga tribes and sent them to fight in France between 1914 and 1918.
- Alienated from other British Indian troops on European soil, the Nagas developed a sense of unity.
- Many of them returned, and under the leadership of **R.S. Ruichumhao**, formed the Naga Club along with some British officials in 1918. The club provided the foundation for the Naga nationalist movement.
- In 1929, members of the club submitted a memorandum to the Simon Commission, proposing self-rule by the Nagas after the departure of the British from India.
- The Naga Club was later overshadowed by the Naga Hills District Tribal Council formed in 1945, which metamorphosed into a political organisation called Naga National Council (NNC). Under the legendary Angami Zapu Phizo, the NNC waged a war of independence against the Indian Union in the 1950s.

News in-depth

General Studies-1

Internal migration in India and its implications

About internal migration

- The Economic Survey of India-2017 estimates that the magnitude of Inter-State migration in India was close to 9 Million Annually between 2011 and 2016. The Census of 2011 depicts the total number of Migrants close to 139 million.

Trends and Patterns of Migration

- Majority of the Migrants belong to socio-economically weaker sections of the society, who have negligible education.
- The key destination states include- Delhi, Maharashtra, Gujarat, Haryana & Punjab. The Source states are Uttar Pradesh, Bihar and Jharkhand.
- The migrants are absorbed by Industries such as Construction, Domestic Help, Textiles, Transportation, Mines, Quarries and Agriculture.
- The economic liberalization has paved way for better job opportunities for people and hence it has increased migration of people.

Factors responsible for Internal Migration

- Pull and Push factor is responsible for internal migration. Modern facilities in life such as better education, job opportunity urban area acts as magnets for migrant population, it is called 'pull factor'. On the other hand unemployment, hunger, starvation pushed the people out to distant urban areas.
- Higher dependence on agriculture as primary source of employment.
- Educated young in rural area are not interested in agriculture. They are moving towards urban area for alternative income opportunity.
- Lack of security frequent natural calamity in some disturbing region is forcing people to migrate.

- Marriage is another factor for internal migration. As per 2011 census 49% migration is for marriage (Patrilocal marriage).
- Low Income and Low Literacy Rate forces People to search for odd informal Jobs in urban areas.

Challenges faced by the migrant people

- Migrated people have poor organised space to voice their grievance and complaints.
- Many times they are exploited to work under unsafe conditions below subsistence level and reside in inhuman conditions.
- Inter-state migrants vote do not count in destination city so they are politically less important.

How migration has benefited

- Positive effect on economy aggregation of investment, rich labour force has made urban areas engines of economy.
- Migrants also take skills gained, social messages, knowledge back thus ensuring national integration.
- Migrant remittance improves the human capital in rural areas especially among SC, ST's and weaker sections of society.
- Opportunity to escape caste oppression, division and restrictive social norms.

Way forward

- There is urgent need for national policy that comprehensively addresses critical needs of migrant population.
- States role should be properly executed in ensuring equality, basic dignity, education, health needs and minimal social protection scheme that prevents from impoverishment.
- Proper implementation of Provision of Urban Amenities to Rural Areas (PURA) to halt push factors.
- Important and critical data on migration trends needs to be maintained for policy making.

General Studies-2

Challenges of working mother

Introduction

- A recent photograph on social media of a lady cop discharging her duties with her infant daughter and the subsequent transfer of the woman to the district of her choice has brought up the discussions on the rights of working women.

Legislations to protect rights of working women

- **Equal Remuneration Act, 1976** which prevents discrimination between men and women workers in terms of remuneration.
- **Maternity Benefit (Amendment) Act 2017:** Increased the duration of paid maternity leave available for women employees to 26 weeks. The act has also mandated crèche facility for every establishment employing 50 or more employees and the women employees should be permitted to visit the facility 4 times during the day.
- **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013** seeks to protect women from sexual harassment at their place of work. The Act makes it mandatory for every employer to constitute an internal complaints committee (ICC) to entertain complaints made by aggrieved women.

Challenges

- Though there are sufficient laws aimed at protecting working women's rights and to encourage them to join the workforce, the **implementation** of these laws remains as the major challenge.
- Still, many companies have not set up necessary infrastructures like crèche facility, internal complaints committee.
- Many private firms avoid giving jobs to women as then they have to give them maternity leave up to 26 weeks.
- According to the International Labour Organisation, India's Female Labour Force Participation is among the lowest in the world. One major reason is several mothers give up on their careers as they are not receiving adequate support system to balance their double burden-performing paid work outside the

domestic sphere as well as homemaking and child-care work inside the home.

- These laws benefit only a small percentage of women who are working in organised sector. Majority who work in the **unorganised sectors** like farmers, contract labourers etc. are not covered under any social protection schemes.

What needs to be done?

- Robust monitoring mechanism should be setup to check compliance of establishments and those who fail to provide the facilities for working women should be punished.
- Workplaces should be sensitised to make it more **women friendly** like providing flexible working hours.
- Awareness should be generated on women's rights and the civil societies should be empowered to take up these causes.
- Government should compensate companies to meet expenditures incurred in providing maternity benefits.

Conclusion

- The larger society should realise the need for an **equal partnership** of mother and father in raising a child and should acknowledge women's double burden to find means to minimise it and ultimately relieve women of it.

Always a fine balance

Introduction:

- The RBI-government tussle prompts a debate on defining the RBI Governor's position and the role of government.
- The recent fight between the two shows the need to understand the concept of "separation of power".



Separation of Powers:

- It is a doctrine propounded by Montesquieu for a nation to have good governance. Each institution has a specified role and it has to be within its limit to ensure free and fair governance.

- The current tussle between RBI and the central government is to be seen in the light of a power struggle between a statutory body vs executive.
- RBI indeed has autonomy but within the limits of RBI Act, 1934. So, the ultimate control is in the hands of the elected representatives.

Why is this limitation important?

- RBI has economists and technocrats who decide the monetary policy of the country. They are not directly answerable to the people and hence the elected representatives have to have a control on them.
- Seen from this perspective, the limits to the RBI's autonomy will be clear. It is autonomous and accountable to the people ultimately, through the government.
- The onus is thus on responsible behaviour by both sides.

Government's failure:

- But what if they do have fundamental disagreements, as they seem to be having now, and are unable to arrive at a common ground? Well, the Brahmastra of Section 7 is certainly available to the more powerful side; but just as the weapon is a deterrent never to be used, so is Section 7.
- The cleverness of the politician in Delhi lies in negotiating with the RBI and having his way without ever threatening to unleash the Brahmastra — the other side knows it exists anyway. This is where the present dispensation in Delhi seems to have failed.
- To avoid situations such as the one we are seeing now that former RBI Governor Raghuram Rajan urged for a **clear enunciation of the RBI's responsibilities**.
- He points out that the position of the **RBI Governor in the government hierarchy is not defined**. The Governor draws the salary of a Cabinet Secretary, and it is generally understood that he will explain his decisions only to the Prime Minister and the Finance Minister.
- There is a danger in keeping the position ill-defined because the constant effort of the bureaucracy is to drown down its power.

Way Forward:

- It is the right time that the role and power of RBI governor is well defined by now. And, The Governor has to be conscious of the limits to his autonomy at all times, and the government has to consider the advice coming from RBI.

India- Japan 13th Summit

Why in news?

- PM Modi met his Japanese counterpart Shinzo Abe in Yamanashi for the 13th India-Japan annual summit to review the progress in ties and deepen strategic dimension of the bilateral relationship between India and Japan.

Background:

- The recent US actions on trade tariffs, sanctions against Iran and Russia, as well as the U.S.'s exit from several multilateral and security regimes are impacting both India and Japan in different ways. Such as:
 1. The impact is more direct to India, as the economy has been hurt by new American tariffs, review of its GSP (trading) status, and restrictions on visas for professionals, possible U.S. sanctions over Indian engagement with Iran as well as defence purchases from Russia pose a looming challenge.
 2. U.S. trade tariffs are a concern and its exit from the Trans-Pacific Partnership is confining Southeast Asian countries into a free trade regime under Chinese domination. In addition, the U.S.'s on-again, off-again nuclear negotiations with North Korea are making Japan uneasy.
- The negative impact of US action deeper the India-Japan relation into the next level.

About India- Japan 13th summit:

- The summit will strengthen the partnership as a "Special Strategic and global partnership".
- The talk between the two leaders is to enhance strategic and defence cooperation.
- In response to the Chinese growing dominance in the Indo-Pacific region, Japan has formulated the vision statement "free and Open Indo-Pacific", to which India has extended unwavering support.
- Both the leaders announced the negotiation on an "Acquisition and cross-servicing Agreement, a Logistics sharing pact", that would allow Japanese ships to

get fuel and servicing at Indian naval bases.

- A new Foreign and Defence Ministerial 2+2 Dialogue were announced to supplement an already formidable array of bilateral dialogue mechanisms.
- Both countries agreed to a “**Bilateral Swap Arrangement**”(refer Economy section) that allow their central Banks to exchange local currencies for up to \$75 billion, this is substantially more than Swap agreement between China & Japan.
- The agreement is signed in the field of Digital technology, Artificial Intelligence, Healthcare and Wellness, Sports and Food Value Chain.

Significance of this summit:

- PM Modi was the first foreign leader who had been invited by Japan PM Abe, he also quoted him as ‘one of his most dependable friends’.
- PM Modi also visited the FANUC industrial facility, one of the largest makers of industrial robots in the world; it shows the India’s interest in robotics technology.
- Besides bilateral issues, the two leaders are discussed on a range of regional and global issues including the situation in the Indo-Pacific region.
- The major Japanese companies had committed to investing 320 billion yen in India, which is expected to create at least 3000 new jobs.

About India -Japan Vision statement:

- Vision statement referred to the necessity of ensuring the freedom of navigation and the importance of upholding the United Nations convention on the Law of Sea (UNCLOS), a set of conventions that China has been accused of breaking in the South China Sea.
- The vision statement specifically mentioned the willingness of both countries to expand concrete cooperation with U.S. and other partners.

About India- Japan relation:

- In 1991, Japan was among the few countries that unconditionally supported to come out of financial crisis. This was the beginning of Indo-Japan relations.
- From 2006, it was upgraded to a Global and Strategic Partnership with a provision of annual Prime Ministerial Summits.
- India, Japan and USA conducted the trilateral naval exercise “MALABAR” from

2007 onwards, which reflected the shared perspectives on Indo-Pacific maritime security. The year 2007 was declared as “India-Japan Friendship year”.

- The two countries have several institutional dialogue mechanisms, there is also a Foreign Office Consultation at the level of Foreign Secretary / Vice Foreign Minister as well as a 2+2 Dialogue at the level of Foreign and Defence Secretaries.
- The India-Japan Comprehensive Economic Partnership Agreement (CEPA) that came into force in August 2011. It is the most comprehensive of all such agreements concluded by India and covers not only trade in goods but also Services, Movement of Natural Persons, Investments, Intellectual Property Rights, Custom Procedures and other trade-related issues.
- In 2016, India & Japan signed the nuclear deal which aims to build six nuclear reactors in Delhi. Japan has right to supply nuclear reactors, fuel and technology to India for these reactors. This nuclear deal is the first for Japan to sign with a non-signatory of Non-proliferation treaty.
- To counter the China Belt and Road initiatives (BRI), India and Japan jointly developed the “Asia-Africa Growth Corridor” which develops the infrastructure and digital connectivity to Africa.

Drawbacks in India- Japan relation:

- Through India and Japan have a good economic relation; Indian exports to Japan have contracted in four of last six years.
- India and Japan Proposed the multiple infrastructure development projects in third country including the Asia-Africa Growth Corridor, but not a single project has taken off.
- The largest gap between form and substance is evident in the area of defence cooperation like both countries have failed to realise the sale of defence articles.

Way forward:

- In a broader sense, only the Anti-China coalitions can so far bolstering strategic congruence between India- Japan ties.
- To deepen the ties between the India-Japan, Japan must adopt a more independent-minded approach in the Indo-Pacific that is less attached to the

West and more amenable to partners like India.

India- Maldives relation:

Why in news?

- Former Maldivian President Abdul Gayoom, asked India to play a Positive role in restoration of democracy in Maldives by exerting pressure on the new ruling regime.

Background:

- Maldives Crisis was escalating dangerously with then president Yameen declaring a state of political emergency in the country in February of this year, this was further triggered when then President Yameen ordered to arrest the chief justice of Maldives Supreme Court, this was followed by the defeat of president Yameen in presidential election held last month.

Recent development in India-Maldives relation:

- India have cordial relation with Maldives for many years, but the recent development would set the fire on both country relation, they are
- Since March 2018, the Maldivian authority denied the working visas to Indians; this step is seen as India's condemnation of Maldives emergency.
- Maldives has also asked India to take back its gift of the two Dhruv Advanced Light Helicopters manned by the personnel of Indian Navy and Indian Coast Guard.
- India voted against Maldives and in favour of Indonesia for a non-permanent seat at the UN Security Council this year.
- Maldives signed a free trade agreement with China in December 2017. India saw this as betrayal of Maldives publicly stated "India First" policy and Maldives is also becoming Pakistan & China's closest friend and ally.

Significance of Maldives in World Politics:

- An Indian Ocean archipelago of 1,192 islands, the Maldives is a tourist paradise. It is a low-lying country that is expected to be among the first in the world to go under water as a result of climate change.



- The Maldives has emerged as an important 'pearl' in China's "String of Pearls" for ensuring the security of its sea lanes, especially the unhindered flow of critically-needed energy supplies from Africa and West Asia through the Indian Ocean.
- India's concern stems from the increasing Chinese strategic presence in the Maldives, where Chinese Nationals now account for the largest tourist arrivals in the islands.

Way forward:

- India would develop the cordial relation with Maldives newly formed government, which would be sensitized towards the India's concerns.
- India shouldn't show the Big Brother attitude towards the small neighbours.
- China is here to stay in the Maldives, as well as across the rest of South Asia. Delhi needs to learn to deal with issues realistically.

India Pins its prestige on Mauritius project:

Why in News?

- As work gets under way on one of India's prize projects in the Indian Ocean to upgrade facilities on the Agalega islands in Mauritius, the government is watching a battle brewing in the Mauritius parliament over the project.

Background:

- In 2015, when PM Modi had witnessed the signing of the agreement for Agalega Islands, the that provided for "setting up and up gradation of infrastructure for improving sea and air connectivity" and enhancing "capabilities of the Mauritian Defence Forces in safeguarding their interests in the Outer Island.
- However, since then, there have been growing reports over the Indian Naval and Coast Guard's interests in setting up transponder systems and surveillance

infrastructure, which has led to some local protests.

- In March this year, several islanders, including some from Agalega, which has a tiny population of 300, formed the “Koalision Zilwa Pou Lape” (Islanders Coalition for Peace), to lobby against the Agalega project.

Why Protest Fuelled Against this Project?

- The major reason for the protest is the fact that Mauritius is in a major International legal battle over the ownership of its Chagos Island at present, which were turned into the U.S. Diego Garcia naval base.
- In Such a way France maintains naval bases in the Indian Ocean and stations frigates off its Reunion Island, While China has a String of naval assets in the region from Gwadar to Djibouti.
- These entire factors leading to fears of their peaceful island region becoming increasingly militarized.

About Agalega island:

- Agalega are two outer islands (the North and South Island) of Mauritius located in the Indian Ocean, about 1,000 kilometers (620 mi) north of Mauritius island.
- The population of the islands as of July 2011 was estimated at 300. The islands has a total area of 2,600 hectares. The North Island of Agalega Island is home to the airstrip and the capital Vingt Cinq.
- The islands are known for their coconuts, the production of which is their main industry, and for the Agalega day gecko.
- This island is leased to Indian Military for the development of strategic assets.



Way forward:

- India needs to project itself as a credible and long term partner in a more persuasive manner, than what has been the experience in recent years.

- Islands in the Indian Ocean Region have acquired distinctive strategic relevance and India will have to step up its appeal and comfort index, more so since it is pitted against China's deep pockets.

Strategic Partners:

Why in news?

- American President Trump decision to reject the India's invitation to attain the Republic Day parade as Chief Guest raised the question, what does strategic partnership meant for the both sides.

Strategic Partnership:

- At the end of ideological Cold War, India was forced to look west given the paradigm shift in the geopolitics of the world. Today both India and U.S are among the most vibrant foreign cohorts and strategic partners.
- India-U.S. bilateral relations have developed into a "global strategic partnership", based on shared democratic values and increasing convergence of interests on bilateral, regional and global issues.
- But the definition for Strategic Partnership for Indian conception is different from U.S Conception.

Background:

- The U.S- India relations have remained relatively robust despite a flurry of new tension points from U.S Tariffs and sanction policies to controversial statement by Trump about India.
- Trump Foreign policy and U.S relationship with India and broader world, is drastically different from Obama Policy, but more than decade, a bipartisan consensus in Washington had supported the India's entry into exclusive club of U.S strategic partners. Like the Israel, United Kingdom, Australia, Japan and Saudi Arabia which attracted the strategic relationship designation.
- With respect to the strategic partnership with India, Trump Administration is Transactional to core, which not to be dirty one in international diplomacy.
- However, the India-U.S relation in security moved forward by inking of the Communications Compatibility and Security Agreement (COMCASA).

Why India Needs USA?

- America remains the critical stabilizing force in Asia through its military and diplomatic power projection and commitments to the region.
- China has chosen episodically to ignore global non-proliferation norms, a pattern of behaviour that the United States has assiduously sought to curtail. Though no nation can a priori prevent future Chinese proliferation activities, only a U.S.-led international effort has any chance of success.
- India will be better able to protect its national interests in Pakistan and Afghanistan in coordination with the United States.
- The United States has also remained one of the top sources of foreign direct investment in India, bringing important managerial expertise, capital, and technology with it to the dynamic Indian market.

Why US Needs India?

- India is an indispensable partner for the United States. Geographically, it sits between the two most immediate problematic regions for U.S. national interests.
- India's position against radicalism and terrorism corresponds with that of the United States.
- As India modernizes and grows it will spend trillions of dollars on infrastructure, transportation, energy production and distribution, and defence hardware. U.S. firms can benefit immensely by providing expertise and technology that India will need to carry out this sweeping transformation.

Way Forward:

- The Commitment from USA side will do deeper than deal-making e.g. both the countries need to resolve critical definition issues like what does "strategic partnership meant" for each side.
- Trust and goodwill must be shared between the countries.

Political Crisis in Sri Lanka

Why in news?

- Sri Lankan President Maithripala Sirisena suspended Parliament and sacked Prime Minister Ranil Wickremesinghe and naming Mahinda Rajapaksa as the new prime minister. However, parliament

speaker refused to endorse Wickremesinghe sacking.

- The political turmoil came amid growing tensions between Sirisena and Wickremesinghe on several policy matters.

Conditions on the ground

- For a long time there has been uneasy coalition between the two political fronts lead by Sirisena and Wickremesinghe.
- Resurgence of Mahinda Rajapaksa popularity as he was able to build upon the anti-government opinion.
- Every section, institution including armed forces is divided over the issue of devolving power.

Structural problems in Sri Lanka

- Core issues like Executive presidency vs Westminster style government i.e., tussle between PM and President over power sharing has not been settled.
- Unitary vs federal system: As they have come out after long struggle with separatist forces such as LTTE, for north eastern part of the country is yet to see clarity.
- Sri Lanka so far had 4 constitutions and Ranil Wickremesinghe was pushing for 5th constitution in hardly 70 year of existence.

How it matters to India

- India's concern has been over peaceful neighbourhood. India stands for a "**united Sri Lanka**", but wants an "early and full implementation of the 13th Amendment" that provides for devolution in the Tamil majority Northern and Eastern provinces.
- Ranil Wickremesinghe's idea of new constitution has talked about maximum devolution which goes against wishes of certain section of polity backed by Mahinda Rajapaksa.
- India has invested in many infrastructure development in the Sri Lanka some being Mattala airport, also SL recently allowed India to jointly develop the Trincomalee port (oil tanks farm) in north-eastern part of the country

Way forward

- Government of India stand should be to upheld the democratic spirit and traditions and push for maintaining the stability in the region.
- Strategically engaging with Sri Lankan government to secure India's interests as China's presence in the region is growing.

- India should avoid using the China lens to view Sri Lanka, respecting the country's autonomy to engage with any willing partner. The more India treats Sri Lanka as an equal partner, the stronger the relationship is likely to grow.

RTE Act and its performance

About the act

- The Right of Children to Free and Compulsory Education Act or Right to Education Act (RTE) is an Act of the Parliament of India enacted on 4 August 2009, which provides for free and compulsory education for children between the age of 6 to 14 years in India under Article 21A of the Indian Constitution.
- 'Compulsory education' forms an obligation on the appropriate Government and local authorities to provide and ensure admission, attendance and completion of elementary education by all children in the 6-14 age groups.

Important features of the act

- It made education guaranteed as fundamental right under article 21 as free and compulsory.
- It requires all private schools (except the minority institutions) to reserve 25% of seats for the poor and other categories of children (to be reimbursed by the state as part of the public-private partnership plan).
- The act mandates that parents are to constitute the 75% members in the management committees. The School management committees are to have 50% women.
- The Right to Education Act 2009 makes corporal punishment unlawful.
- The act states that National & State Commissions for protection of Child rights would monitor the effective implementation of measures in this act.

Reasons for its poor performance

- The focus of the RTE Act is primarily on "inputs" (like infrastructure) rather than "outcomes". Recent ASER reports highlights the poor learning outcomes among students.
- The manner in which reimbursement is to be provided to private schools have created a number of problems.

- Not holding back a child in a class has meant that a large number of children are getting promoted without acquiring necessary attributes. The model of "no detention" was apparently picked up from the West and transplanted in India without taking into account the conditions prevalent here.

Implementation challenges

- Financial problems - Though act makes local body responsible for the effective implementation of RTE they do not have enough financial resources to carry out its functions.
- Lack of coordination and governance deficit between central and state government hampers the effectivity of RTE.

Way forward

- Focus on retention- Tracking dropouts and preparing and mainstreaming them into age-appropriate classes has been subsumed into existing scheme activities.
- Think decentralisation- It make sure that academic calendar will be decided by the local authority, which, for most States and Union Territories, is the panchayat. The solutions have to be localised and contextualised.
- Pupil-teacher ratio -Teacher provisioning should be the first option to fund as no educationally developed country has built up a sound schooling foundation without a professionally-motivated teaching cadre in place.

National Health Protection Scheme

About the scheme

- Budget 2018-19 Union Budget has laid foundation of the flagship scheme National Health Protection Scheme (NHPS) – Ayushman Bharat which offers various health benefits to the people. This scheme will overcome the flaws of the existing scheme Rashtriya Swasthya Bhima Yojana (RSBY).
- The National Health Protection Scheme has promised to cover 10 crore families involving 50 crore family members with health insurance cover of Rs. 5 lakh for secondary and tertiary hospitalisation.

Important features

- The NHPS will pay for the hospitalisation costs of its beneficiaries through 'strategic purchasing' from public and private

hospitals. This will prevent unnecessary tests and medicines to tap in the coverage.

- It is a centrally sponsored scheme, so fund sharing is of 60:40 (Centre: State).

Engaging with state governments

- Allocation of resources to fulfill the criteria of funding of the scheme which is in the ratio of 60:40 between Centre and States.
- NHPS will require a well-defined list of conditions that will be covered, diagnostic tests and treatments, cost and quality standards, and measuring health outcomes and cost-effectiveness. Central and State health agencies or their intermediaries will have to develop the capacity for competent purchasing of services from a diverse group of providers
- States must develop an institutional setup to implement the scheme either through the trust or an insurance company.

Why NHPS is not one stop solution?

- Out of pocket expenditure constitute over 60% health care financing in India. NHPS fails to address this issue.
- NHPS creates an effective market for investments in tier 2 and tier 3 cities thus neglecting underserved rural areas.
- Scheme emphasizes on private sector rather than public sector for delivery of services.
- Schemes sustainability depends upon the pricing and government outlay, but various state governments have failed to limit the rising outlay thus increasing budgetary constraints best case would be Mizoram allocated Rs.777 per family premium under RSBY but now allocation increased to Rs.1920.
- The major concern was expressed over putting healthcare in the hands of private healthcare providers and insurance companies when they are poorly regulated.

Way forward

- NHPS requires a high level of cooperative federalism, both to make the scheme viable and to ensure portability of coverage as people cross State borders.
- An incentive-based model for the government hospitals will help improve their performance and ease some of the supply constraints. The government should purchase healthcare services from the private players, wherever the government unable to cater the demand.

- Primary health services will reduce the need for advanced care. Hence along with providing insurance coverage, there is also a need for proactively strengthening primary health services and public hospitals.
- Moreover, there should be a link between institutions or hospitals, with health centres and the community as community engagement helps in planning and implementation of programme.

Need for strong regulatory mechanism over social media giants

What happened?

- In late September, Facebook announced that it had discovered a security breach that had compromised nearly 50 million accounts.
- Hackers had reportedly exploited flaws in the code for the 'View As' feature, which lets users see what their own profile looks like to someone else, to steal "access tokens". By stealing them, the hackers were able to serially take over people's accounts.

Why it became so important?

- Earlier Facebook enjoyed absolute discretion over revealing to the public about the leakages, hacking of account which undermines the privacy concerns of user. For instance Cambridge Analytica-Facebook data theft scandal came to limelight after long time.
- European Union (EU)'s General Data Protection Regulation (GDPR) forced Facebook to go public with the breach so promptly, even before the full extent of the damage could be assessed. The GDPR's stringent guidelines require companies to make such events known within three days of their discovery.
- It shows that even the billion dollars tech and social media giants would have to play as per law of the land.

Why do we need strong regulatory mechanism?

- Personal data has been used to influence sensitive electoral processes as the recent incidents of Cambridge Analytica where Facebook Data was used to influence election Polls in US and France. This act raises concerns over free and fair election and creating political polarisation which threatens the healthy democracy.

- Intimate personal data of users with or without their consent has been utilised. Sale of unauthorized data (user information) Transparency regarding sale & use of data and terms and conditions of agreement there in.
- The Fake News on Social Media Platforms which are easy and fast to Spread influences the People's Preferences during elections.
- There is need to solve power asymmetry between Facebook, tech giants and the ordinary user.

What steps need to be taken?

- Setting up Data Protection Authority of India (DPA) an independent regulatory body responsible for the enforcement and effective implementation of the law, consisting of a chairperson and six full-time members.
- A copy of the data in India too focussing on data localisation as data is the new oil in the market.
- The need for separate and more stringent norms for protecting the data of children, recommending that companies be barred from certain types of data processing such as behavioural monitoring, tracking, targeted advertising and any other type of processing which is not in the best interest of the child.

Initiatives taken by government in this regard

- Justice B.N. Srikrishna Committee submitted its report on data protection along with the draft data protection bill.
- The recent ruling of Supreme Court which made right to privacy as a fundamental right also raised the need to protect this right by appropriate legislation.

Way forward

- Strict Implementation of IT Act to ensure Privacy of User Data and Rules regarding the Use of Technology.
- Making Facebook and Twitter Aware about the Consequences of Violation of Law of the Land.
- MoU between Government and Facebook to ensure Facebook provides its Website with adequate Protective measures to ensure any Misuse of Data is not done.
- New Delhi can push India-U.S. data sharing agreement to serve the interests of its law enforcement agencies.

India-Japan ties

Introduction

- India and Japan are natural allies and share historical ties. As 21st century will be Asian century, India and Japan relations will play key role in shaping it.
- Recently 13th India-Japan annual summit was held in Japan, and two countries vowed to increase mutual cooperation in multiple areas.

Major agreements that guide the relations

- The two countries have signed a Comprehensive Economic Partnership Agreement (CEPA) in 2011 to facilitate growth in bilateral trade.
- CEPA described as the most comprehensive of all such agreements concluded by India covering trade in goods and services, movement of persons, investments, intellectual property rights, Customs procedures and other trade related issues.
- Japan and India have involved in joint infrastructure projects in third countries, including announcing an Asia-Africa Growth Corridor (AAGC).
- Quadrilateral security dialogue an informal strategic dialogue between India, Japan, United States and Australia.
- The framework of Indo-Japanese defence ties has grown considerably, including the joint declaration on security cooperation, the action plan to advance such cooperation, a defence equipment transfer agreement, a classified military information security protection agreement.

Analysis of relations

- Most of the the agreements have yet to realise its full potential for instance bilateral trade has yet to hit even the \$20 billion mark whereas bilateral trade between China- Japan is around \$400 billion worth of goods annually.
- But not a single project has taken off as part of AAGC including in Myanmar and the Mekong countries where the two share complementary interests.
- In defence cooperation too the two sides have failed to realise the sale of a single defence article and there exists no conventional threat-specific contingency scenario in which the two militaries can practicably cooperate.

Positive developments in recent times

- Japan has been extending bilateral loan and grant assistance to India and is its largest bilateral donor and most preferred and allowed nation to invest in NE of India
- Japan is also backing the Mumbai-Ahmedabad High Speed Rail (bullet train) service full cooperation is underway. Approximately 81% of the cost of the project is to be funded through a soft loan from Japan's government.
- Japan has been one of the biggest sources of investment flows into India, accounting for \$28.16 billion in FDI between April 2000 and June 2018.

Way forward

- India can leverage Japan's strengths in areas such as medical equipment and hospitals as greater synergy or integration between the Ayushman Bharat project and the Japanese programme called Asia Health and Wellbeing Initiative.
- India and Japan should remain committed to a non-Western, pluralistic model of cooperative security in Asia.

India hopes for U.S waiver on Iran

Why in news?

- As the November 4 fast approaching a deadline that USA gave its allies to cut oil import by zero, Indian government hopes for possible US waiver.
- The spokesperson of the Ministry of External Affairs said India has been in talks with the U.S. as well as with Iran to ensure uninterrupted energy supply.

Background

- On 8 May, USA came out from the international nuclear deal with Iran. Revoking the deal US administration announced to re-impose the US economic sanctions on Iran.
- The Iran deal also called as Joint Comprehensive Plan of Action was signed on July 14, 2015 between Iran, the U.S., China, France, Russia, the U.K., Germany and the European Union.
- It is a huge setback to multilateral diplomacy and the rules-based international order. The re-imposed

sanctions will target critical sectors of Iran's economy, such as its energy, petrochemical, and financial sectors.

How US sanctions are going to affect India

- Oil prices might fluctuate and Iran is presently India's third biggest supplier and any increase in prices will hit both inflation levels as well as the Indian rupee.
- New U.S. sanctions could slow or even bring critical investments to a halt depending on how strictly they are implemented. For instance India's investments in developing Chahabar port might negatively affected thus jeopardising its plans to circumvent Pakistan's blocks on trade with Afghanistan.
- Greater connectivity programs like International North South Transport Corridor (INSTC), building Railway line to connect Afghanistan are in danger this affect Indian interests in long run.
- Also the added cost of having to recalibrate Indian fuel refineries that are used to process Iran's special crude.
- Finally, there would be the impact on India's regional security situation, because Iranian-Arab divide rise and an angry Iran will get closer into the China-Russia corner.

Is India fallen into trap?

- Under the US pressure Indian oil import from Iran are on decline affecting both economy and relations with Iran. But past incident, when US was playing a same game with North Korea it used India. However Trump administration protected their interest with Singapore summit.
- This shows that we are losing to US pressure and destabilising relations with Iran.

Way forward

- Diplomatic engagement with US to appraise the Indian energy requirements and push for possible long term waiver.
- Trying to build consensus among the world community to take collective decision rather unilateral decision that would put regional stability in danger.

General Studies 3

Draft National Electronic Policy 2018

Introduction:

- The draft electronic policy 2018 has been released by the Ministry of Electronics and IT (MeitY) which seeks to replace the 2012 policy, aiming for a turnover of USD 400 billion in domestic electronics manufacturing industry by 2025.

Objectives of the policy:

- The draft policy also **aims to promote ease of doing business** for the entire Electronic System Design and Manufacturing (ESDM) sector.
- It aims to **encourage industry-led research** and development and innovation in all sub-sectors of electronics.
- The policy aims to also push the **Startup ecosystem** in emerging technology areas such as 5G, Internet of Things, artificial intelligence and machine learning, and their applications in areas such as defence, agriculture, health, smart cities and automation.
- It involves development of **core competencies in all the sub-sectors of electronics**, including electronic components and semiconductors, telecommunication equipment, medical electronics, defence electronics, automotive electronics, industrial electronics, strategic electronics, etc.

Highlights of the Draft National Policy on Electronics 2018:

- The policy targets production of one billion mobile handsets by 2025, valued at USD 190 billion (about Rs 13 lakh crore).
- It is targeted to export 600 million mobile handsets valued at USD 110 billion (about Rs 7 lakh crore).
- 20 Greenfield and three brownfield electronic manufacturing cluster projects have been sanctioned with the project outlay of Rs 3898 crore, including Rs 1577 crore from the Government of India.
- It promotes a forward looking and stable tax regime, including advance intimation to the industry to plan investments in the form of Phased Manufacturing Programme (PMP) in various segments of electronics, with a sunset clause should be promoted.

- It mentions that government would levy cess on identified electronic goods to be considered to generate resources for promotion of certain critical sub-sectors of electronics manufacturing such as semiconductor wafer fabrication and display fabrication units.
- Replacing the M-SIPS (Modified Special Incentive Package Scheme) with schemes that are easier to implement such as interest subsidy and credit default guarantee to encourage expansion in electronics manufacturing sector.

Challenges in the policy:

- The availability of the skilled manpower does not seem to be on par with the policy vision and hence there is an urgent need to skill the manpower by changing the curriculum and the training.
- With upcoming technologies like Artificial Intelligence and Internet of Things(IoT) focussing on only mobile phones may not be adequate, we need holistic plan for the electronics sector.

Way Forward:

- With ambitious policy we need to focus on skilling the manpower to avoid jobless growth in the future.

PPP in District hospitals

Introduction:

- NITI Aayog has recently issued guidelines on the implementation of PPP (Public Private Partnership) investment in district hospitals focussed on 3 non-communicable diseases namely: Cancer, Heart disease and pulmonary diseases.
- In India 62% of the death is due to the non-communicable diseases, and this model is expected to bring down such death.

The salient features of the NITI Aayog's proposed PPP are:

- It pushes for PPPs focused on cancers, heart conditions and respiratory tract diseases in non-metros.
- It would see private healthcare service providers bid for a 30-year contract to upgrade and operate these facilities within district hospitals.
- The scheme is designed to address the acute shortage of trained personnel and

infrastructure in public hospitals, particularly those situated away from large cities and metropolitan centres.

- The NITI Aayog asserts that the scheme will lead to infusion of resources by the private sector, and will expand access to healthcare services.
- Beneficiaries of the government insurance schemes will be able to get treatment at these hospitals but there will be no reserved beds or quota of beds for free services.
- General patients will also be allowed to seek treatment.

Positive aspects:

- Private players will improve infrastructure and upgrade technology.
- Expansion of care by 50-100 beds provide improved access to district hospital and reducing congestion situation.
- Government may provide Viability Gap Funding for infrastructure development.
- Reducing out-of-pocket expenditures of common man.
- Ensure better treatment to non-communicable diseases.
- The pressure on major cities will be reduced and thus ensure quality healthcare.
- Improvement in health indicators will be seen.

Major drawbacks:

- Private may focus only on profit and hence may stay away from remote areas.
- The model does not provide any information on the pricing strategy and its impact on public budgets.
- An implementation of the proposal will further worsen inequity in access to healthcare services.
- This will further weaken the ability of public hospitals to attract and retain trained doctors and other health workers.
- Since the huge investment is going to be focussed on this the prevention treatment may get only less investment and focus.

Conclusion:

- The success of the policy depends on how far the government is able to negotiate fair price and quality healthcare from the private sector. An effective alternative will be to increase the public investment in the overall health sector.

Strained RBI-Centre ties

Introduction:

- There has been increased tension over the last few months between the RBI and the Central Government. Off late, these fights have taken public forums to blame each other.
- Recent issues being the way RBI is handling week PSB's, tight liquidity and way of resolving bad loans in power sector.
- Recently the central government used sec 7 of RBI Act which was never invoked since the inception of RBI in 1935.

About sec 7 of the RBI Act, 1934:

- **RBI**, the central bank of India came into existence through RBI Act, 1934. RBI is the monetary authority, banker's bank, controller of Forex reserves and issuer of currency.
- The RBI is an entity independent of the government as it takes its own decisions. However, in certain instances, it has to listen to the government. This provision in the RBI Act is contained in its Section 7 which says:
 - (1) The Central Government may from time to time give such directions to the Bank as it may, after consultation with the Governor of the Bank, consider **necessary in the public interest.**
 - (2) Subject to any such directions, the general superintendence and direction of affairs of the bank shall be entrusted to a Central Board of Directors which may exercise all its powers and do all the duties as exercised by the bank.
- Clearly, the section empowers the government to issue directions in public interest to the central bank, which otherwise does not take orders from the government.

Areas of contention:

Points of contention

- RBI's PCA framework that places restrictions on weak banks

- Stricter rules for recognising non-performing assets



- More power to the RBI to regulate banks

- Transfer of surplus to Centre as dividend

- Proposal for a separate payments regulator

- Measures to support NBFCs in ongoing liquidity squeeze

- **The three major areas which RBI does not agree with centre is:** The first concern is that RBI feels that it does not have adequate powers to regulate the public sector bank. It wants stricter rules in NPA definition and PCA (Prompt corrective Action) norms.
- The second issue is regarding the transfer of forex surplus, which RBI wants it to keep it with them but Centre wants to get the surplus to close the fiscal gap it is facing.
- The third issue is RBI does not want Centre to bring up an independent payment regulator, which may diminish its power.
- **The Centre on its part is concerned over the following issues:** It is upset that the central bank is not doing enough to ease the on-going liquidity crisis among NBFCs.

Autonomy and accountability

- Autonomy of RBI is critical for maintaining stability in financial and capital market also to preserve the confidence of domestic and global investor in the economy.
- There is accountability mechanism as RBI governor has to come before parliamentary committees to indicate and defend their monetary policies, major decisions.

Way forward:

- Autonomy of RBI though not mentioned in the constitution evolved over time with keeping the global practice also it is critical for positive externalities on the economy.
- Financial and capital markets need to be managed based on the certain well defined

objectives not on political pressures such as loan waiver, upcoming general election.

- These tussle are small issues due to the practical economic problem, the centre and RBI needs to work together to resolve the differences and this face-off is not healthy to the economy.

Who pays taxes and who doesn't

Introduction:

- A recent report by CBDT shows that the number of tax returns filed as gone up but the corresponding tax collection has not shown any increase.
- More surprisingly the average income reported by rich Indians has decreased.

Highlights of the data

- The tax-GDP ratio rose to reach a 10-year high mark of 5.98 percent.
- The direct tax base has significantly widened in the last few years. The number of returns filed has risen from 3.79 crore in FY 2013-14 to 6.85 crore in FY 2017-18, a growth of more than 80%. It implies increasing tax compliance in India.
- The number of salaried taxpayers has increased from 1.70 crore to 2.33 crore, a rise of 37 percent.
- There has been continuous increase in the amount of income declared in the returns filed by all categories of taxpayers over the last three assessment years (2014-15 to 2017-18).
- The average income declared by the salaried taxpayers rose to Rs 6.84 lakh from Rs 5.76 lakh, up 19 percent.

Reasons for less tax collection:

- The **under-reporting** is a serious concern for people of high income tax group. After 2016 the average income reported by the people in high income group has reduced by 16%.
- **Tax avoidance and evasion** by companies is also an area of concern. In the year 2017-18 only 7% corporates reported profit.

Reforms in tax laws needed:

- The existing tax laws does not require filing of returns if the income is less than (Rs2.5 lakhs) the taxable income. So many professionals easily manipulate their account.
- **The law should mandate filing of returns by all professionals regardless of their profit.** This will increase

compliance enabling the tax authorities to also scrutinise better.

- For companies, the tax law allows offsetting of past losses against future profits. These easy manipulation techniques should be done away.
- The numerous tax exemptions also has to be done away.
- There is also need to enhance the deterrence power of the law.

Way Forward:

- The means of punishing the offenders can be increased by integrating the GST, the income tax and the Ministry of Corporate Affairs' databases. These measures will go a long way in deepening the tax base among high-income groups and professionals.

Universities and Patents

What is this?

- There is need to improve present IPR (Intellectual Property Rights) standards and awareness in the country. Union government has introduced new IPR policy for this. The success of this policy depends on multiple stakeholders and universities being one of them.
- Universities and patent mutually benefit each other. Patents help universities to improve their ranking, establish an innovation ecosystem, incubate knowledge-based start-ups, earn additional revenue and measure research activity.

Why in news?

- In its biggest push to create entrepreneurial universities, the University Grants Commission (UGC) has now asked all universities in India to set up Intellectual Property (IP) Centres.

Challenges

- Universities face dearth of IP professionals as they are very critical resource to smoothen the process.
- India has a poor patent agent density, with only about 2,000 registered patent agents currently in practice.
- Central government is the only agency that conducts competitive examination to test the proficiency in the patent law without a regular setup.

New National Intellectual Property Rights (IPR) policy 2016

- The Policy which is in compliance with WTO's (World Trade Organisation) agreement on TRIPS (Trade Related aspects of IPRs), aims to sustain entrepreneurship and boost 'Make in India' scheme.
- It also aims to create awareness about economic, social and cultural benefits of IPRs among all sections of society.

Seven objectives of IPR Policy

1. IPR Awareness: To create public awareness about the economic, social and cultural benefits of IPRs among all sections of society.
2. Generation of IPRs: To stimulate the generation of IPRs.
3. Legal and Legislative Framework: To have strong and effective IPR laws, which balance the interests of rights owners with larger public interest.
4. Administration and Management: To modernize and strengthen service-oriented IPR administration.
5. Commercialization of IPRs: Get value for IPRs through commercialization.
6. Enforcement and Adjudication: To strengthen the enforcement and adjudicatory mechanisms for combating IPR infringements.
7. Human Capital Development: To strengthen and expand human resources, institutions and capacities for teaching, training, research and skill building in IPRs.

Why is there a need to strengthen our patenting system and IPR REGIME?

- To formulate incentives in the form of tax concessions to encourage research and development (R&D).
- To face the challenges from regional trade agreements like RCEP, TPP. For instance, developed countries pushed for increasing the complexity in WTO ministerial conference held in Buenos Aires.
- It is also critical to strengthen the Make In India, Startup and Digital India schemes.

Good initiatives

- Ranking of universities and institute under National Institutional Ranking Framework (NIRF) has given weightage to patents applied for, granted and commercialised by them.
- National Assessment and Accreditation Council, awarding up to 24 points to an institute which sets up an innovation

ecosystem and has a facility for identifying and promoting IPRs.

- The All India Council for Technical Education (AICTE) model curriculum for its member institutions lays emphasis on the need for IPR education in technical institutes

Way forward

- The ambitious goal set by India's IPR Policy will be realised only when the examination becomes the foundation for making a career in IPR.
- Well defined syllabus, format, post-qualification continuous education system could create best environment that enables graduates to choose this field as new career option.
- Nevertheless, pushing IPRs as a marketable financial asset, making India attractive for IP registration and better awareness and enforcement would help India become innovation hub of the world, promoting growth and expansion in manufacturing and service sectors, helping StartUps and generating employment to masses.

The Big Picture: Elephants' Right of Way

Why in news:

- Seven elephants died after coming in contact with a sagging electric wire in Odisha's Dhen-kanal on 26 October. This is the highest casualty of elephants in a single incident in Odisha.
- A herd of 13 elephants was passing through the village in Sadar Forest Range and seven of them came in contact with an electric wire.

How serious is the problem?

- Environment ministry data shows that 655 elephant deaths took place in India from 2009 to 2017. This translates into an average of about 80 elephant deaths per year, seven every month and one every four days.
- The main reasons for elephant deaths are electrocution, train accidents, poaching and poisoning.
- Restriction of movement of elephant along the corridor has resulted in stagnating the genetically stock thus endangering the species growth.
- Most of the energy, human resource, attention has been on Tiger and Rhino.

- Enough attention has not been given to their shrinking habitat and endangering the elephant corridor.
- No crop insurance companies coming forward to cover the crops in these areas further frustrating farmer making him vulnerable to take extreme steps to kill elephants.

Why Human- Elephant conflict occurs?

- Elephant by nature is a nomadic animal its unique metabolic conditions make them to migrate in search of green pasture.
- Unlike tigers whose territories are within the protected areas, the elephants have only 20% of their range falling in the protected areas like national parks and sanctuaries.
- Due to deforestation and thinning out of forests, the elephants tend to disperse into areas with high density of human population.
- Growing human population has resulted in the expansion of human settlements in the elephant migration routes. The conflict gets intensified when people try to chase away elephants with searchlights, crackers or guns, making the elephants even more aggressive.
- Changing lifestyle of tribal population and emerging new need to cater to their economic development.

Steps taken

- Government of India has released guidelines for management of Human Elephant conflicts.
- Funds have been disbursed from project elephant to chronically affected areas.
- Using of solar operated fences to reduce the injury due to electrocution thus ensuring the protection to crops.
- Indian Railways under **Plan Bee** an innovative method to prevent elephants from approaching the railway lines by using honey bee.

Way forward

- Using GIS and remote sensing to create mapping data and assess the real time movement of elephants along their corridors.
- Multiple stakeholders like state and central forest departments, railways and electrical departments, local population, wildlife, farmers should come together to improve the conditions on ground.

- Elephants are seen as heritage animal of India, it has contributed to economic, social and cultural developmental history of India.
- Credible insurance system, fixing the responsibility for such negligence, strict legal action, controlling the elephant population through artificial methods.

How old vehicles are scrapped, replaced in countries around the World

Recent SC order

- Amid worsening air quality in Delhi, the Supreme Court has directed the Delhi transport department to prohibit plying of 15-year-old petrol vehicles and 10-year-old diesel vehicles in the National Capital Region (NCR).

Lack of Vehicle Scrapping Policy

- Delhi alone has around 38 lakh vehicles that fall in this category. There are no official figures for how many of them are still plying in Delhi-NCR. To comply with SC order these vehicles must either be sold outside Delhi-NCR where they are allowed to ply, or be scrapped and recycled.
- However, there is no nationwide Vehicle Scrapping Policy in India. The proposed vehicle scrap policy for mandatory disposal of more than 20 years old commercial vehicles remain under discussion for more than three years.
- Earlier this year, Delhi's Transport Department also issued orders to scrap old and unclaimed vehicles. Under this policy, individuals who want to get their vehicles scrapped have to get clearance

and a certificate from the area Motor Licensing Officer. But the Delhi rules do not offer any incentive for people to scrap old vehicles to buy newer, cleaner ones.

Practices in other countries

- The United States and the United Kingdom use innovative policies to encourage people to scrap old, fuel-inefficient vehicles with new ones. The aim was two-pronged — to boost sales in the motor industry and to tackle emissions.
- In the US, the programme called “cash for clunkers” offer people between \$2,500 and \$4,500 to scrap their older vehicles.
- The UK has an incentive scheme which gave car owners up to £2,000 for scrapping an old vehicle and buying a new, more efficient one (co-funded by the government and the car industry) if they scrapped their old cars. The scheme was valid only if the individual bought a more fuel-efficient vehicle.

End-of-life policy

- Several cities across the world have comprehensive vehicle scrapping policies combined with an end-of-life policy.
- In countries such as Germany and the US, there are guidelines for recycling 80% to 90% of the vehicle's parts. End-of-life regulations also make it mandatory for the manufacturers to take responsibility for final disposal of vehicles.

Way Forward

- Policymakers should soon finalise the nationwide scrapping policy which should work in tandem with an end-of-life policy to reduce the number of fuel-inefficient vehicles polluting our cities.