1. ABC of GST

- Goods & Services Tax Law in India is a comprehensive, multi-stage, destination-based tax that will be levied on every value addition.
- To understand this, we need to understand the concepts under this definition. Let us start with the term 'Multi-stage'. Now, there are multiple steps an item goes through from manufacture or production to the final sale. Buying of raw materials is the first stage. The second stage is production or manufacture. Then, there is the warehousing of materials. Next, comes the sale of the product to the retailer. And in the final stage, the retailer sells you – the end consumer – the product, completing its life cycle.

Why is Goods and Services Tax so Important?

- So, now that we have defined GST, let us talk about why it will play such a significant role in transforming the current tax structure, and therefore, the economy.
- Currently, the Indian tax structure is divided into two – Direct and Indirect Taxes. Direct Taxes are levies where the liability cannot be passed on to someone else. An example of this is Income Tax where you earn the income and you alone are liable to pay the tax on it.
- In the case of Indirect Taxes, the liability of the tax can be passed on to someone else. This means that when the shopkeeper must pay VAT on his sale, he can pass on the liability to the customer. So, in effect, the customer pays the price of the item as well as the VAT on it so the shopkeeper can deposit the VAT to the government. This means that the customer must pay not just the price of the product, but he also pays the tax liability, and therefore, he has a higher outlay when he buys an item.
- This happens because the shopkeeper has paid a tax when he bought the item from the wholesaler. To recover that amount, as well as to make up for the VAT he must pay to the government, he passes the liability to the customer who has to pay the additional amount. There is currently no other way for the shopkeeper to recover whatever he pays from his own pocket during transactions and therefore, he has no choice but to pass on the liability to the customer.
- Goods and Services Tax will address this issue after it is implemented. It has a system of Input Tax Credit which will allow sellers to claim the tax already paid, so that the final liability on the end consumer is decreased.

How does GST work?

CGST: where the revenue will be collected by the central government

SGST: where the revenue will be collected by the state governments for intra-state sales

IGST: where the revenue will be collected by the central government for inter-state sales

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In most cases, the tax structure under the new regime will be as follows:-

Transaction	New Regime	Old Regime	Comments
Sale within the state	CGST + SGST	VAT + Central Excise/Service tax	Revenue will now be shared between the Centre and the State
Sale to another State	IGST	Central Sales Tax + Excise/Service Tax	There will only be one type of tax (central) now in case of inter-state sales.

Example

A dealer in Maharashtra sold goods to a consumer in Maharashtra worth Rs. 10,000. The Goods and Services Tax rate is 18% comprising CGST rate of 9% and SGST rate of 9%. In such cases the dealer collects Rs. 1800 and of this amount, Rs. 900 will go to the central government and Rs. 900 will go to the Maharashtra government.

Now, let us assume the dealer in Maharashtra had sold goods to a dealer in Gujarat worth Rs. 10,000. The GST rate is 18% comprising of CGST rate of 9% and SGST rate of 9%. In such case the dealer has to charge Rs. 1800 as IGST. This IGST will go to the Centre. There will no longer be any need to pay CGST and SGST.

How will GST help India and common man?

The basis of Goods and Services Tax is the seamless flow of Input Tax Credit (ITC) along the entire value addition chain. At every step of the manufacturing process, businesses will have the option to claim the tax already paid in the previous transaction. Understanding this process is crucial for businesses. A detailed explanation here.

To understand this, let us first understand what is Input Tax Credit. It is the credit an individual receives for the tax paid on the inputs used in manufacturing the product. So, if there is a 10% tax that the individual must submit to the government, he can subtract the amount he has paid in taxes at the time of purchase and submit the balance amount to the government.

Let us understand this with a hypothetical numerical example.

Say a shirt manufacturer pays Rs. 100 to buy raw materials. If the rate of taxes is set at 10%, and there is no profit or loss involved, then he has to pay Rs. 10 as tax. So, the final cost of the shirt now becomes Rs (100+10=) 110.

At the next stage, the wholesaler buys the shirt from the manufacturer at Rs. 110, and adds labels to it. When he is adding labels, he is adding value. Therefore, his cost increases by say Rs. 40. On top of this, he has to pay a 10% tax, and the final cost therefore becomes Rs. (110+40=) 150 + 10% tax = Rs. 165.

Now, the retailer pays Rs. 165 to buy the shirt from the wholesaler because the tax liability had passed on to him. He has to package the shirt, and when he does that, he is adding value again. This time, let's say his value add is Rs. 30. Now when he sells the shirt, he adds this value (plus the

VAT he has to pay the government) to the final cost. So, the cost of the shirt becomes Rs. 214.5 Let us see a breakup for this:

  Cost = Rs. 165 + Value add = Rs. 30 + 10% tax = Rs. 195 + Rs. 19.5 = Rs. 214.5

  So, the customer pays Rs. 214.5 for a shirt the cost price of which was basically only Rs. 170 (Rs 110 + Rs. 40 + Rs. 30). Along the way the tax liability was passed on at every stage of transaction and the final liability comes to rest with the customer. This is called the Cascading Effect of

Action	Cost	10% Tax	Total
Buys Raw Material @ 100	100	10	110
Manufactures @ 40	150	15	165
Adds value @ 30	195	19.5	214.5
Total	170	44.5	214.5

Taxes where a tax is paid on tax and the value of the item keeps increasing every time this happens.

  In the case of Goods and Services Tax, there is a way to claim credit for tax paid in acquiring input. What happens in this case is, the individual who has paid a tax already can claim credit for this tax when he submits his taxes.

  In our example, when the wholesaler buys from the manufacturer, he pays a 10% tax on his cost price because the liability has been passed on to him. Then he adds value of Rs. 40 on his cost price of Rs. 100 and this brings up his cost to Rs. 140. Now he has to pay 10% of this price to the government as tax. But he has already paid one tax to the manufacturer. So, this time what he does is, instead of paying Rs (10% of 140=) 14 to the government as tax, he subtracts the amount he has paid already. So, he deducts the Rs. 10 he paid on his purchase from his new liability of Rs. 14, and pays only Rs. 4 to the government. So, the Rs. 10 becomes his input credit.

  When he pays Rs. 4 to the government, he can pass on its liability to the retailer. So, the retailer pays Rs. (140+14=) 154 to him to buy the shirt. At the next stage, the retailer adds value of Rs. 30 to his cost price and has to pay a 10% tax on it to the government. When he adds value, his price becomes Rs. 170. Now, if he had to pay 10% tax on it, he would pass on the liability to the customer. But he already has input credit because he has paid Rs.14 to the wholesaler as the latter's tax. So, now he reduces Rs. 14 from his tax liability of Rs. (10% of 170=) 17 and has to pay only Rs. 3 to the government. And therefore, he can now sell the shirt for Rs. (140+30+17) 187 to the customer.

Action	Cost	10% Tax	Actual Liability	Total
Buys Raw Material	100	10	10	110
Manufactures @ 40	140	14	4	154
Adds Value @ 30	170	17	3	187
Total	170		17	187

  In the end, every time an individual was able to claim input tax credit, the sale price for him reduced and the cost price for the person buying his product reduced because of a lower tax liability.

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The final value of the shirt also therefore reduced from Rs. 214.5 to Rs. 187, thus reducing the tax burden on the final customer.

So essentially, Goods & Services Tax is going to have a two-pronged benefit. One, it will reduce the cascading effect of taxes, and second, by allowing input tax credit, it will reduce the burden of taxes and, hopefully, prices.

Summing Up

The idea behind having one consolidated indirect tax to subsume multiple currently existing indirect taxes is to benefit the Indian economy in a number of ways:

- It will help the country's businesses gain a level playing field
- It will put us on par with foreign nations who have a more structured tax system
- It will also translate into gains for the end consumer who not have to pay cascading taxes any more
- There will now be a single tax on goods and services

In addition to the above,

- The Goods and Services Tax Law aims at streamlining the indirect taxation regime. As mentioned above, GST will subsume all indirect taxes levied on goods and service, including State and Central level taxes. The GST mechanism is an advancement on the VAT system, the idea being that a unified GST Law will create a seamless nationwide market.
- It is also expected that Goods and Services Tax will improve the collection of taxes as well as boost the development of Indian economy by removing the indirect tax barriers between states and integrating the country through a uniform tax rate.

Is GST a snag for Federalism?.

101st constitutional amendments act that insert article 279A into the constitution and led the foundation of GST council.GST council works on the principle of cooperative federalism. But whether in the name of cooperative federalism there is incursion into the financial autonomy of the states is the matter of discussion.

In favour

1. The constitution has provided for clear division of legislative, executive and financial power among center and states. GST has limited the financial power of states in its jurisdiction in indirect taxes.
2. The states now have to depend upon GST council for any changes in indirect taxation system.
3. The decision in GST council has to be taken by 75% votes with center having weightage of one third votes. It may undermine the aspiration of few states.
4. It is against the decentralization principle which the government is working on.

Against

1. Our constitution is flexible to meet the needs of changing circumstances.
2. 101st Constitutional amendments act carried on with the provision of special majority so as not to modify the constitution irrationally.

3. GST council has kept alcohol, petroleum and diesel outside the purview of GST which accounts for major revenue for the states.
4. A uniform taxation throughout the country will improve the ease of doing business and remove the bottleneck in carrying business which will benefit the states which the previous system was lacking.
5. There is provision of compensation for the states for five year in case of any losses.
6. The GST council has only subsumed the current indirect taxes and has not debarred any states for finding any new source of revenue.
7. The voting power of states in GST council is two third. Hence the center can't undermine the financial autonomy of majority of the states.
8. The center has already devoluted 42% of tax collection to states and left it on the states to decide upon the manner in which they want to spend on their requirement. It has provided more financial autonomy to the states already.
9. In most other countries with GST like Australia, Argentina etc only one government collects the GST but in India both the centre as well as the 29 states has the right to collect their due portions of GST.

Hence it can be said that in order to meet the need of changing circumstances the constitution need to be amended from time to time. The GST has undermined some financial autonomy of the states but at the same time it has provided for proper remedy.

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2. ECONOMY

2.1   CVC can now probe corruption cases in private sector banks

- The Central Vigilance Commission (CVC) can now probe allegations of corruption in private sector banks and against their employees.
- In this regard, the Reserve Bank of India (RBI) has given the necessary approval to the CVC.

Issue

- The move comes after the Supreme Court last year ruled that the chairman, managing directors and other officers of a private bank could be seen as public servants when it came to the Prevention of Corruption (PC) Act, 1988.
- The apex court had said all officials working in banks operating under an RBI license would be defined as public servants under the PC Act. It had said bank employees, private or public, were on public duty and therefore came under the law.
- The Supreme Court had also referred to Section 46A of the Banking Regulation Act and said that such bank officials were considered public officials.

CVC

- Central Vigilance Commission (CVC) is an apex Indian governmental body created in 1964 to address governmental corruption.
- It has the status of an autonomous body, free of control from any executive authority.
- It is charged with monitoring all vigilance activity under the Central Government of India, advising various authorities in central Government organizations in planning, executing, reviewing and reforming their vigilance work.
- It was set up by the Government in February,1964 on the recommendations of the Committee on Prevention of Corruption, headed by Shri K. Santhanam, to advise and guide Central Government agencies in the field of vigilance.
- It submits its report to the President of India.
- CVC is advisory body.

Members

- A Central Vigilance Commissioner – Chairperson;
- Not more than two Vigilance Commissioners – Members;

Appointment

- The Central Vigilance Commissioner and the Vigilance Commissioners shall be appointed by the President on recommendation of a Committee consisting of the Prime Minister (Chairperson), the Minister of Home Affairs (Member) and the Leader of the Opposition in the House of the People (Member).
- Their term is 4 years or 65 years, whichever is earlier.

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Removal

The Central Vigilance Commissioner or any Vigilance Commissioner can be removed from his office only by order of the President on the ground of proved misbehavior or incapacity after the Supreme Court, on a reference made to it by the President, has, on inquiry, reported that the Central Vigilance Commissioner or any Vigilance Commissioner, as the case may be, ought to be removed.

2.2   Tax processed foods: FSSAI panel

- An expert panel set up by food regulator FSSAI recently submitted its report to the government.
- The report by the 11-member panel on 'Consumption of Fat, Sugar and Salt (FSS) and its health effects on Indian population' suggests ways to cut consumption of unhealthy food products and reduce rising burden of chronic diseases like cancer and diabetes.
- The FSSAI had constituted the panel consisting of experts from different fields like medicine, nutrition and dietetics from well-known medical research and academic institutions.

Significance of the report

- This report will serve as a guideline document for all the stakeholders, including the industry, the FSSAI and consumers, in reducing consumption of fat, sugar and salt through processed food products.

Important recommendations made by the committee

- Additional tax on highly processed commodities and sugar sweetened beverages.
- Imposing additional tax on the purchase of commodities such as pre-packaged foods with high salt and fat content, sugar sweetened beverages, etc. can be a pragmatic approach to reduce their intake.
- Imposition of excise tax on unhealthy eating products would lead to positive health effects among population.
- The nutrition-related programmes of the government can be supported through profit from taxing unhealthy food products.
- Advertisement ban for foods high in FSS during children TV shows or kids TV channels is urged. In fact, the country should progress towards a total ban law as being done in a few other countries like Chile.
- Celebrity endorsements of such foods need to be discouraged, adding that online social media websites should also comply with advertising ban for unhealthy foods.
- Reliable monitoring systems should be there to examine FSS intake periodically at the national level.
- The industry should be encouraged for "voluntary reformulation" of food products to cut down FSS intake in packaged food items.
- Like total calories, amount of carbohydrates, sugar, fat, protein, sodium, dietary fibre, amount of trans-fat added in food should be mandatory for labeling in food products.

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- On nutrient-specific recommendations, the panel said fats should be largely consumed in the unsaturated form.
- The consumption of unsaturated fatty acids, especially the long chain mono- and poly unsaturated-fatty acids, should be encouraged in everyday diets.

Note

- In India, the rising burden of mortality and morbidity due to chronic diseases such as cardiovascular, respiratory diseases, diabetes and cancers is alarming.
- In the next 25 years, the burden of chronic diseases will tend to increase continuously as a ramification of the rapidly transitioning food intakes, changing dietary patterns and other lifestyle factors.

2.3   President's nod for law on RBI taking action against loan defaulters

- President Pranab Mukherjee has approved an ordinance, **Banking Regulation (Amendment) Ordinance, 2017**, with amendments to the Banking Regulation Act, 1949, allowing the Reserve Bank of India to take timely action against loan defaulters.
- This comes after the Union cabinet recently approved the proposal to amend Section 35 of the BR Act and sent the ordinance for the President's approval.

Key measures proposed in the ordinance

- The government may authorise the Reserve Bank of India (RBI) to issue directions to banks to initiate insolvency proceedings against defaulters under the bankruptcy code.
- RBI on its own accord can issue directions to banks for resolution of stressed assets.
- RBI may form committees with members it can choose to appoint to advise banks on resolution of stressed assets.

Significance

- Earlier banks couldn't invoke the insolvency and bankruptcy code due to fear of being questioned. Now with RBI directing banks to initiate insolvency this will be a transparent and market-determined approach.

Besides, banks that were part of a consortium found it difficult to trigger bankruptcy proceedings. This ordinance attempts to solve that problem.

As per a study on urban populations, a salient finding was that Low Income Groups (LIG) reportedly consumed more fried snacks and sweets than High Income Groups (HIG) and, the highest consumption of bakery items was in slums.

2.4   Policy for providing preference to domestically manufactured iron & steel products in government procurement

- The Union Cabinet has approved the policy for providing preference to domestically manufactured iron & steel products on Government procurement.

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- This policy seeks to accomplish the PM's vision of 'Make in India' with objective of nation building and encourage domestic manufacturing.

New policy

- The policy mandates to provide preference to Domestically Manufactured Iron & Steel Products (DMI&SP), in Government Procurement.
- The policy is applicable on all government tenders where price bid is yet to be opened.
- The policy provides a minimum value addition of 15% in notified steel products which are covered under preferential procurement.
- In order to provide flexibility, Ministry of Steel may review specified steel products and the minimum value addition criterion.
- While implementing who shall provide the policy, it poses trust on each domestic manufacturer who shall provide self-certification to the procuring Government agency declaring that the iron & steel products are domestically manufactured in terms of the domestic value addition prescribed.
- It shall not normally be the responsibility of procuring agency to verify the correctness of the claim. In few cases, the onus of demonstrating the correctness-of the same shall be on the bidder when asked to do so.
- In case any manufacturer is aggrieved, a grievance redressal committee set up under the Ministry of Steel shall dispose of the complaint in a time bound manner, in four weeks.
- There are provisions in the policy for waivers to all such procurements, where specific grades of steel are not manufactured in the country, or the quantities as per the demand of the project cannot be met through domestic sources.

Significance of this policy

The policy is envisaged to promote growth and development of domestic steel Industry and reduce the inclination to use, low quality low.

2.5   Package to resolve NPAs gets Cabinet nod

- The government has cleared a package to resolve the persistent rise in non-performing assets that is plaguing public sector banks and denting credit growth.
- The package includes an ordinance to amend the Banking Regulation Act of 1949 to empower the Reserve Bank of India to take more actions to check bad loans.
- **Need for reforms**
- Bad loans in the Indian banking system have gone up sharply in the last one year.
- According to Reserve Bank of India data, gross NPA, as a percentage of gross advances went up to 9.1% in September 2016 from 5.1% in September 2015.
- During the same period, stressed assets (which is gross NPA plus standard restructured advances and write-offs), moved up from 11.3% to 12.3% and some estimates suggested it had doubled since 2013.

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- Public sector banks share a disproportionate burden of this stress. Stressed assets in some of the public sector banks have approached or exceeded 20%. Some estimates suggest the total stress in the Indian banking system is about Rs. 14 lakh crore.

2.6   NITI Aayog for less teaching, more research

- NITI Aayog has proposed reforms to ensure that investments in research better translate to more products and bolster "innovation and development".
- The NITI Aayog suggestions stem from a three-year vision document that outlines targets and goals the Ministries — from railways to environment — ought to achieve by 2020.

Reforms proposed by NITI Aayog

- Faculty at "world class" institutions prioritise research and be allowed to "reduce their teaching responsibility," if required.
- Such universities also ought to be allowed to recruit research staff from abroad and be encouraged to compete for research projects from industry.
- The so-called 'world class universities' are part of a government-outlined plan to raise funding for 10 public and 10 private universities and mould them into institutions that rank among the world's best.
- The names of these institutions are expected to be made public later this year.
- The NITI Aayog also pitches for a new 'National Science, Technology and Innovation Foundation' headed by a distinguished scientist.
- This will coordinate with science and technology departments, ministries, governments and private sector bodies and deliberate on national issues and recommend interventions.
- Such an organisation will review progress of projects every six months and propose "course corrections" for achieving these goals.
- It also proposes a database of all existing schemes related to science and technology across ministries and departments. This will have information on the coordinating ministry, its objectives and available funds. Its key purpose would be to avoid "duplication of efforts, reduce approval times, increase accountability and collaboration between entities and measured outcomes.

2.7   NGOs told to open accounts with core banks

- The Home Ministry has instructed 5,845 NGOs to open their accounts in banks having core banking facilities.
- The NGOs are also required to furnish the account details for real time access of security agencies in case of any discrepancy.
- The move is aimed at checking "errant" NGOs especially those organizations receiving foreign funding.

- The Home Ministry has mandated the NGOs registered under the Foreign Contribution Regulation Act to have their accounts in either nationalised banks or in a few private banks that has core banking facilities.
- Around 3,768 NGOs have been told that their accounts in banks does not have core banking facilities.
- Another 2,077 NGOs have been instructed to furnish their bank accounts details as such details are not available with the home ministry.
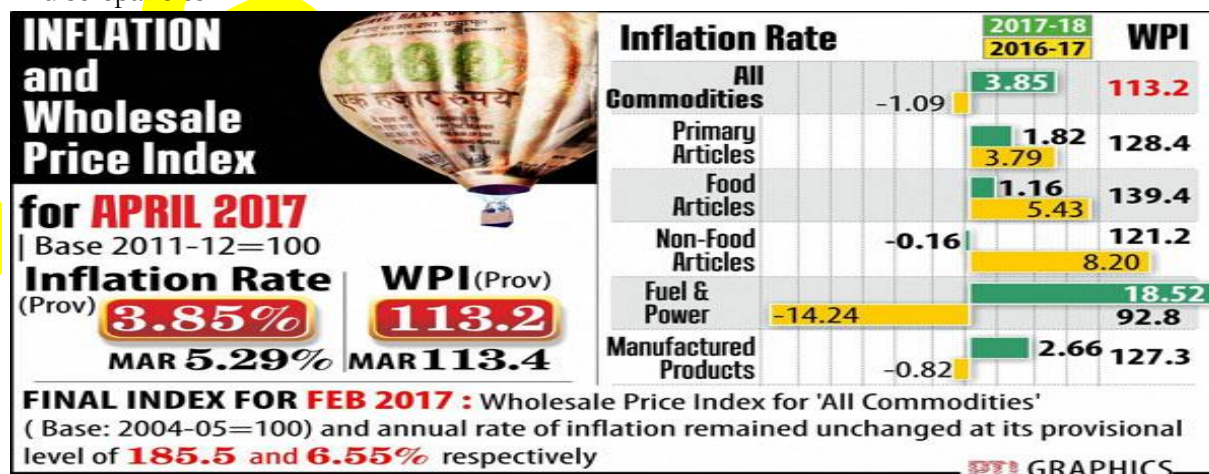
Significance of the move

The core banking system with all of the branches of the networked banks interconnected would allow the security agencies to access the accounts of the NGOs on real time basis.

2.8   New series WPI, IIP released with base year 2011-12

- The government has released the new series of Index of Industrial Production (IIP) and the Wholesale Price Index (WPI) with new base year of 2011-12, a long pending demand of the economists and experts.
- The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation, revises the base year of the macroeconomic indicators.

Why revision?

- A revision is done as a regular exercise, to capture structural changes in the economy and improve the quality and representativeness of the indices.
- Revisions in the IIP are necessitated to maintain representativeness of the items and producing entities and also address issues relating to continuous flow of production data. In the past, such changes were effected at the time of a revision in the base year.
- Instead of the earlier 2004-05, base year for the IIP and the WPI will be 2011-12. Already, the Consumer Price Index (CPI), the Gross Domestic Product (GDP) and gross value addition etc., have 2011-12 as the base year. The common base year of 2011-12 is aimed at reducing discrepancies.

INFLATION and Wholesale Price Index for **APRIL 2017** | Base 2011-12=100 **Inflation Rate** (Prov) **3.85%** **WPI**(Prov) **113.2** MAR 5.29% MAR 113.4 **FINAL INDEX FOR FEB 2017 :** Wholesale Price Index for 'All Commodities' (Base: 2004-05=100) and annual rate of inflation remained unchanged at its provisional level of **185.5** and **6.55%** respectively **PTI GRAPHICS**

Inflation Rate	2016-17	2017-18	WPI
All Commodities	-1.09	3.85	113.2
Primary Articles	3.79	1.82	128.4
Food Articles	5.43	1.16	139.4
Non-Food Articles	-0.16	8.20	121.2
Fuel & Power	-14.24	18.52	92.8
Manufactured Products	-0.82	2.66	127.3

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What is Index of Industrial Production (IIP)?

- Index of Industrial Production (IIP) is an index which helps us understand the growth of various sectors in the Indian economy such as mining, electricity and manufacturing.
- IIP is a short term indicator of industrial growth till the results from Annual Survey of Industries (ASI) and National Accounts Statistics are available.
- IIP is released by the Central Statistics Office (CSO) of the Ministry of Statistics and Programme Implementation.
- IIP is published monthly, six weeks after the reference month ends.

New series of IIP

- The new series of IIP will include 809 manufacturing products and 55 mining products that are re-grouped into 521 item groups.
- The new series of IIP will include technology items like smart phones, tablets, LED television etc.
- A technical review committee has also been established to identify new items by ensuring that the series remains relevant. The committee is slated to meet at least once a year.
- In the new series, there has been an increase in number of factories in panel for reporting data and closed ones have been removed.
- The number of source agencies reporting data for compilation of IIP in the new series will be 14 as compared to 15 in the current series. This is on account of the fact that data on 'Iodised Salt' in the new series will be provided by the Department of Industrial Policy and Promotion (DIPP).
- The electricity sector now includes data from renewable energy sources.
- The coverage of the mining sector has undergone a change on account of the MCDR Amendment Rules, 2016.

Wholesale Price Index (WPI)

- Wholesale Price Index (WPI) is a price index which represents the wholesale price of a basket of goods over time. In simple words, WPI is an indicator of price changes in the wholesale market.
- WPI measures the changes in the prices charged by manufacturers and wholesalers. WPI measure the changes in commodity prices at selected stages before goods reach to the retail level.
- In several countries such as India, it is used to measure the inflation and the change in the average price level of goods traded in wholesale market.
- It is released on a weekly basis to measure the change in the wholesale price of a set of goods.
- WPI is published by the Economic Adviser in the Ministry of Commerce and Industry.

New series of WPI

- The number of items covered in the new series of the WPI has increased from 676 to 697. Overall, 199 new items have been added and 146 old items have been dropped.
- Under the primary articles, new vegetables and fruits like radish, carrot, cucumber, bitter gourd, mosambi (sweet lime), pomegranate, jackfruit, and pear have been added.

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- Under the mineral group, new items like copper concentrate, lead concentrate and garnet have been added and other items like copper ore, gypsum, kaolin, dolomite, and magnesite have been dropped.
- Under the manufacturing items, 173 new items including conveyer belt, rubber tread, steel cables, tissue paper, and wooden splint have been added, while 135 items like khandsari, poppadom, and video CD players have been taken out.
- Under the new series of WPI, weight of manufactured items has decreased to 64.2 per cent from 64.9 per cent in old series.
- Similarly, the weight of fuel and power has decreased to 13.1 per cent from 14.9 per cent. On the other hand, the weights of primary items have increased to 22.6 per cent from 20.1 per cent.

2.9   New Central Sector Scheme – SAMPADA

- The Cabinet Committee on Economic Affairs (CCEA), chaired by the Prime Minister Narendra Modi, approval the re-structuring the schemes of Union Ministry of Food Processing Industries (MoFPI) under new Central Sector Scheme SAMPADA (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters).
- The scheme was approved for the period 2016- 2020 coterminous with the 14th Finance Commission cycle.

SAMPADA

- SAMPADA is an umbrella scheme incorporating ongoing schemes of the Ministry like Mega Food Parks, Integrated Cold Chain and Value Addition Infrastructure, Food Safety, Quality Assurance Infrastructure, Infrastructure for Agro-processing Clusters and Creation of Backward and Forward Linkages.
- The objective of SAMPADA is to supplement agriculture, modernize processing and decrease agri-waste.
- These schemes aim at development of modern infrastructure to encourage entrepreneurs to set up food processing units based on cluster approach, provide effective and seamless backward and forward integration for processed food industry.
- SAMPADA, with an allocation of Rs 6000 crore, is expected to leverage investment of Rs 31400 crore and will handle 334 lakh MT agro-produce valuing Rs 104125 crore.
- It will benefit 20 lakh farmers and will generate 530500 direct/ indirect employment in the country by the year 2019-20.

Inclusions under SAMPADA

- Integrated Cold Chain and Value Addition Infrastructure
- Infrastructure for Agro-processing Clusters
- Creation of Backward and Forward Linkages
- Food Safety and Quality Assurance Infrastructure

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- Expansion of Food Processing & Preservation Capacities

Significance

- The implementation of SAMPADA will result in creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet.
- It will not only provide a big boost to the growth of food processing sector in the country but also help in providing better prices to farmers.
- It will also help in reducing wastage of agricultural produce, increasing the processing level, availability of safe and convenient processed foods at affordable price to consumers.
- It will enhance the export of the processed foods.
- Food Processing Sector has emerged as an important segment of the Indian economy in terms of its contribution to GDP, employment and investment. During 2015-16, the sector constituted as much as 9.1 and 8.6% of GVA in Manufacturing and Agriculture sector respectively.

2.10   National Steel Policy 2017

- The Union Cabinet gave its approval for National Steel Policy (NSP) 2017.
- The Policy embodies the long term vision of the Government to give impetus to the steel sector.
- It seeks to enhance domestic steel consumption and ensure high quality steel production and create a technologically advanced and globally competitive steel industry.

National Steel Policy 2017:

- The NSP 2017 aims to achieve 300 million tonnes of steel-making capacity by 2030.
- It seeks to increase consumption of steel and major segments are infrastructure, automobiles and housing. It also seeks to increase per capita steel consumption to the level of 160 Kgs by 2030 from existing level of around 60 Kg.
- It stipulates that adoption of energy efficient technologies in the MSME steel sector will be encouraged to improve the overall productivity and reduce energy intensity.
- Steel Ministry will facilitate research and development in the sector through the establishment of Steel Research and Technology Mission of India (SRTMI).
- The Union Ministry through policy measures will ensure availability of raw materials like iron ore, coking coal and non-coking coal, natural gas and more at competitive rates.

The policy will:

1. Create self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, CPSEs
2. Encourage adequate capacity additions
3. Development of globally competitive steel manufacturing capabilities
4. Cost-efficient production
5. Domestic availability of iron ore, coking coal and natural gas
6. Facilitating foreign investment
7. Asset acquisitions of raw materials

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8. Enhancing the domestic steel demand

Background:

- Steel is one of the most important products in the modern world and forms the backbone to any industrial economy.
- India being one of the fastest growing economies in the world, and steel finding its extensive application right from construction, infrastructure, power, aerospace and industrial machinery to consumer products, the sector is of strategic importance to the country.
- The Indian steel sector has grown exponentially over the past few years to be the third largest producer of steel globally, contributing to about 2% of the country's GDP and employing about 5 lakh people directly and about 20 lakh people indirectly.
- Untapped potential with a strong policy support becomes the ideal platform for growth.

2.11   Mandatory audit under GST may add to compliance burden

- According to tax experts, the mandatory audit provisions released by the Government will only add to the cost of and time taken for compliance.

Rule

- Under the rules, every registered taxpayer with an annual turnover of more than ₹2 crore has to get his or her accounts audited by a chartered accountant or a cost accountant and provide explanations for any discrepancy between the returns filed under GST and the audited financial statements.
- The main purpose of the Audit appears to be detailed reconciliation of the GST returns with the audited financial statements.

What are the concerns?

- The format is fairly long with 12 different annexures reconciling each and every transaction as reported in the GST return with the financials
- At first glance, it looks fairly long and extensive. This just adds to the pain of companies already struggling to get GST ready.
- One question that is unanswered is whether the Government is expecting reconciliation with the state-wise audited financial statements? As a matter of practice, no company prepares state-wise audited financial statements, and hence this could be a new compliance challenge.

2.12   M.P. shifts fiscal year

- Madhya Pradesh will be the first State to switch to the January-December financial year from the present April-March cycle.
- The change will mean the financial year will coincide with the calendar year.

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- Reports suggest that any change or shift of the financial year will require amendments to different statues and tax law during the transition period, like tax assessment year, changes in infrastructure and more.
- The move is based on Prime Minister Narendra Modi's idea of shifting the financial year to January-December from the existing April-March period.
- The idea was put forward by the Prime Minister during the NITI Aayog's governing council meet in Delhi on 23 April 2017.

2.13   One IP- Two Dispensaries scheme

- "One IP- Two Dispensaries" scheme was launched by the government on the occasion of International Labour Day.
- Under this scheme, ESIC has given an option to an Insured Person (IP) to choose two dispensaries, one for self and another for family through an employer.

Significance of the scheme

- Due to the non-availability of option of second dispensary, the dependant members of family are often deprived of medical benefits as till now, insured persons (IP) had an option of choosing one dispensary for self and family.
- By introducing the concept of 'One IP- Two Dispensaries', Employee's State Insurance Corporation (ESIC) gives an option to an IP to choose two dispensaries, one for self and another for family through an employer.
- From now onwards, individuals as well as their family members will be able to get treatment from either of the dispensaries and in case of emergency from any ESI Institution.
- This scheme will benefit all IPs, especially migrant workers who are working in other than home State, while their families are living in their native States.
- As of now, around 3 crore IPs are covered under ESIC and total number of is over 12 crore.

2.14   Employment under PMEGP falls 9.5%

- A study by ASSOCHAM has found that job opportunities under the Prime Minister's Employment Generation Programme (PMEGP) fell over 9.5% year-on-year to 3.2 lakh in FY16 from more than 3.5 lakh in FY15.

Prime Minister's Employment Generation Programme (PMEGP)

- The PMEGP is an effective scheme aimed at reducing unemployment and generating sustainable employment opportunities in rural and urban India.
- This is credit linked Scheme of Govt. of India by merging erstwhile REGP and PMRY scheme. KVIC is the Nodal Agency at National Level.

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- The Scheme is implemented through KVIC and State/UT Khadi & V.I. Boards in Rural areas and through District Industries Centres in Urban and Rural areas in ratio of 30:30:40 between KVIC / KVIB / DIC respectively.

Key features of the scheme

- No income ceiling for setting up of projects.
- Assistance under the Scheme is available only to new units to be established.
- Existing units or units already availed any Govt. Subsidy either under State/Central Govt. Schemes are not eligible.
- Any industry including Coir Based projects excluding those mentioned in the negative list.
- Per capita investment should not exceed Rs. 1.00 lakhs in plain areas and Rs. 1.50 lakhs in Hilly areas.
- Maximum project cost of Rs. 25.00 lakhs in manufacturing sector and Rs. 10.00 lakhs in Service Sector.

Highlights of the ASSOCHAM's study report

- The number of projects set up under the PMEGP have reduced from over 48,100 in FY15 to about 44,300.
- Uttar Pradesh topped with over 43,000 jobs generated under the PMEGP in FY16, but the number of jobs reduced from more than 48,600 that was generated in FY15 thereby registering a year-on-year decline of more than 11%.
- While the number of credit proposals approved under the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) increased significantly from just over four lakh to over 5.1 lakh between 2014-15 and 2015-16, the approved amount under this scheme fell 6% from ₹ 21,200 crore in FY15 to more than ₹ 19,900 crore in FY16.
- The number of MSMEs which benefited from the Marketing Assistance and Technology Upgradation programme also fell from 359 in FY15 to 303 in FY16.
- The number of trainees under the Entrepreneur Development Programmes Scheme fell significantly from more than 1.4 lakh in FY15 to just over 66,000 in FY16.
- The number of new ideas approved as part of Entrepreneurial Development of SMEs through Incubators rose marginally from 143 in FY15 to 145 in FY16, according to ASSOCHAM.

2.15   e-Krishi Samvad

- e-Krishi Samvad, an online interface, was recently launched by the government.
- e-Krishi Samvad is internet-based interface and is a unique platform that will provide direct and effective solutions to the problems faced by farmers and stakeholders in the agriculture sector.
- With this, people can get the appropriate solutions from the subject matter specialists and institutes through web or SMS.

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- Stakeholders can upload photographs related to diseases of the crops, animals or fishes for diagnostics and remedial measures instantly from the specialists.

The platform is helpful to get information pertaining to welfare and development of agricultural stakeholders.

2.16   Centre tells pharma to pass GST benefits to customers

- The Centre has warned pharmaceutical companies to comply with the anti-profiteering clause in the Goods and Services Tax rules and pass on to consumers any benefit arising out of lower tax rates under the indirect tax regime.

What's the issue?

- The Department of Pharmaceuticals has notified that for scheduled drug formulations on which excise duty is levied on the maximum retail price, the revised price ceiling exclusive of GST would be 95% of the current price ceiling. In case of savings due to lower rate of tax, the benefit may be passed on to the consumers as per the anti-profiteering clause in GST rules.

- The Centre also specified the price rules for non-scheduled drugs under the GST regime, saying that pharmaceutical companies would have to absorb any burden that may arise from higher taxes which would increase the price of the drug more than the permissible 10% increase over their levels in the previous 12 months.

- The companies will have no option but to absorb the net increase, if any, in the incidence of tax on implementation of GST within the permissible limit of 10% for increase of maximum retail price compared to the MRP of preceding 12 months.

Present system

- Under the present system, medicines not under price control are allowed an annual 10% price increase in line with WPI (Wholesale Price Index).

What is anti-profiteering clause in GST Rule?

- Clause 171 has been inserted in the GST bill which provides that it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices.

- This clause further provides for the establishment of an authority against anti-profiteering in order to ensure its compliance.

Why anti-profiteering clause in GST Rule?

- While it's widely claimed that GST is expected to bring down the prices of goods and services once successfully implemented, it is also expected that manufacturers and service providers may not pass on the benefit to the final consumer.

- To counter such practice, the government has put an anti-profiteering clause in the GST bill.

Concerns raised by the industry

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- One of the major contentions of industry against anti-profiteering clause is the lack of clarity on rules related to valuation and tax rates. While four slab-rates have been agreed upon by the GST council, however, what rate will be applicable on what goods that decision is yet to be passed.
- Unless this categorization is done for all the goods and services and a tax rate is mapped to each category, companies will not be able to frame their strategy on product pricing under the new regime.
- Also, comparison of pre-GST and post-GST profits of the company may get impacted for reasons other than input tax credit and change in the tax rate as contained in clause 171. One example could be the free flow of goods across states without entry-tax and lower logistics cost. Such scenario will increase the profit margin post-GST implementation and should not be considered as anti-profiteering.
- Limited time for implementation may result in some discrepancies and eventual penalties under anti-profiteering.

2.17   Cabinet approves Interest Subvention to banks on Short-Term crop loan to farmers

- The Union cabinet has approved the Interest Subvention Scheme (ISS) for farmers for the year 2017-18. The Government has allocated Rs. 20,339 crore for this scheme.
- The scheme will be continued for 1 year and will be implemented by NABARD and RBI.
- The objective of the scheme is to make available agricultural credit for Short Term crop loans at an affordable rate.
- The interest subvention will be provided to Public Sector Banks (PSBs), Private Sector Banks, Cooperative Banks and Regional Rural Banks (RRBs) and to NABARD for refinancing to RRBs and Cooperative Banks.
- The scheme is expected to boost agricultural productivity and production in the country.
- Under this scheme, farmers will be given a short term crop loan up to Rs. 3 lakh payable within one year at an interest rate of 4% per annum.
- Interest subvention of 5% per annum will be provided to those farmers who pay the short term crop loan in time.
- Farmers will have to effectively pay only 4% as interest. For farmers who do not pay crop loan in time the interest subvention of only 2% will be applicable as against 5% available above.
- This institutional credit is expected to demotivate farmers from taking loans from non-institutional sources of credit at high rates of interest.
- Interest Subvention Scheme (ISS) has been running since 2006-07.
- Under this scheme, crop loans are offered at 7% rate of interest for loans up to Rs.3 lakh.
- Further subvention of 3% will be provided to farmers who prompt repay the loans within a period of one year from the date of advance.

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- The scheme also offers post-harvest loans for storage in accredited warehouses against Negotiable Warehouse Receipts (NWRs) for a period of 6 months to check distress sale.

2.18   Anti-profiteering panel to levy penalty, have sunset date

- The GST Council, chaired by Union Finance Minister Arun Jaitley and comprising state finance ministers as members, has approved the anti-profiteering rules.
- As per the rules, a five-member anti-profiteering authority will be set up to decide on levying penalty if businesses do not pass on the benefit of price reduction to consumers under the goods and services tax regime.

What will be the structure of the Anti-profiteering authority?

- The authority will be headed by a retired secretary-level officer.
- As per the structure, the complaints of profiteering would first come to the Standing Committee comprising tax officials from states and the Centre.
- It would forward the complaint to the Directorate of Safeguards (DGS) for investigation, which is likely to take about 2-3 months to complete the inquiry.
- On completion of investigation, the report would be submitted to the anti-profiteering authority which would decide on the penalty.
- A search-cum-selection committee will be set up for finalising the members of the anti-profiteering authority. Officials said it is likely to take about two months to finalise the members.
- Besides the chairman, the four other members of the authority will be joint secretary-level officers who have been commissioners in central excise and service tax either at the Centre or states.

What will be the functions of the Anti-profiteering authority?

- It can take suo motu action, besides acting on complaints of profiteering.
- As per the norms, the authority will have a sunset date of two years and will decide on penalty to be levied.
- It would ask the businesses to refund the price reduction on a proportionate basis to consumers.
- Where the consumer cannot be identified, the amount would be credited to the consumer welfare fund.

What is anti-profiteering clause in GST Rule?

- Clause 171 has been inserted in the GST bill which provides that it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices.
- This clause further provides for the establishment of an authority against anti-profiteering in order to ensure its compliance.

Why anti-profiteering clause in GST Rule?

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- While it's widely claimed that GST is expected to bring down the prices of goods and services once successfully implemented, it is also expected that manufacturers and service providers may not pass on the benefit to the final consumer.
- To counter such practice, the government has put an anti-profiteering clause in the GST bill..

2.19   RBI identifies 12 mega defaulters for Insolvency and Bankruptcy code

- Recently, Reserve Bank of India's internal advisory committee (IAC) had identified 12 accounts for immediate resolution under the Insolvency and Bankruptcy Code (IBC).
- The gross bad debt in the banking system as on March was ₹7.11 lakh crore, which means the 12 accounts contribute to about ₹1.78 lakh crore (25% of non-performing assets of the Indian banking system).

What does bankruptcy mean?

- A company is bankrupt if it is unable to repay debts to its creditors (banks, suppliers etc).

Problem of NPA in India

- The inability to repay debts by some of the Indian firms has resulted in a huge pile of non-performing assets for the banking system.
- A mechanism to free up the money stuck as bad loans is one of the key for the banking system. IBC is seen as one such.

Which are the most stressed sectors having a problem of non-performing assets?

- The RBI had earlier hinted that stress was coming from sectors such as power, telecom, steel, textiles and aviation.

How the RBI came into the picture?

- The government had recently amended the RBI Act, which gave powers to the central bank to direct banks to take punitive action against individual accounts under IBC.

How does the process work under IBC?

- To being with any creditor including banks can start bankruptcy proceedings against defaulters by filing a petition with the National Company Law Tribunal.
- After that, an insolvency professional with significant powers is appointed to take control of the defaulting company and assist the process.
- A creditors committee is formed to represent the interest of lenders and any other party that have been affected due to the default by the company.
- The committee should come up with a resolution plan (which may include selling off defaulted loans or liquidate the company outright). The resolution would require a nod from 75% of the creditors on the committee.

The insolvency professional gets 180 days to come up with a feasible solution on the default issue. The timeline can be extended by another 90 days. If no solution is found within 270 days, a liquidator is appointed. The company can also opt for voluntary liquidation by a special resolution in a general meeting.

2.20   Nod for Insolvency Bill for financial entities

- The government recently enacted the Insolvency and Bankruptcy Code, 2016, for the insolvency resolution of non- financial entities. The proposed Bill complements the code by providing a resolution framework for the financial sector. Once implemented, this Bill together with the code will provide a comprehensive resolution framework for the economy.
- The Union Cabinet has approved the proposal to introduce the **Financial Resolution and Deposit Insurance Bill, 2017**.

Bill

- The Financial Resolution and Deposit Insurance Bill, 2017, seeks to give comfort to consumers of financial service providers in financial distress.
- It also aims to inculcate discipline among financial service providers in the event of financial crises by limiting the use of public money to bail out distressed entities.
- It would help in maintaining financial stability in the economy by ensuring adequate preventive measures, while at the same time providing the necessary instruments for dealing with an event of crisis.
- The Bill aims to strengthen and streamline the current framework of deposit insurance for the benefit of a large number of retail depositors. Further, this Bill seeks to decrease the time and costs involved in resolving distressed financial entities.
- The Bill, when enacted, will pave the way for setting up of a resolution corporation.
- The Bill would provide for a comprehensive resolution framework for specified financial sector entities to deal with bankruptcy situation in banks, insurance companies and financial sector entities.
- It would lead to repeal or amendment of resolution-related provisions in sectoral Acts as listed in the schedules of the Bill.
- It will also result in the repeal of the Deposit Insurance and Credit Guarantee Corporation Act, 1961, to transfer deposit insurance powers and responsibilities to the resolution corporation.
- The resolution corporation would protect the stability and resilience of the financial system; protecting the consumers of covered obligations up to a reasonable limit; and protecting public funds, to the extent possible.

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3. SOCIAL ISSUES AND DEVELOPMENT

3.1   K Kasturirangan, to head drafting committee of National Education Policy

- Eminent scientist and Padma Vibhushan awardee K. Kasturirangan has been appointed the Chairman of the committee to prepare the final draft of the National Education Policy.
- The HRD ministry has chosen experts and educationists from wide-ranging backgrounds to be part of the panel that is expected to recast India's education policy.
- The HRD ministry had a couple of years ago formed a panel under former cabinet secretary T S R Subramanian on the New Education Policy.
- Some of the important commissions on education formed after independence include Radhakrishnan Commission (1948-49) on higher education; Mudaliyar Commission (1952) on secondary education and the Kothari Commission (1964-66).

3.2   Govt sets up Task Force to help compute timely employment data

- The government has set up a task force headed by NITI Aayog vice-chairman Arvind Panagariya to come up with a methodology to generate timely and reliable employment data.
- The Prime Minister Narendra Modi himself has initiated the process and has asked the task force to submit its recommendations at the earliest.

Need for this data

- India does not have reliable data on jobs. The available data is currently outdated.
- The data on jobs in the informal sector which employs country's majority of the workforce is not easliy available.
- Also, the data released by the Labour Bureau is restricted to the organized sector. National Sample Survey Office (NSSO) data which is the most comprehensive data available on jobs is generated with a time lag.
- Better data on jobs data will help policy planners assess the impact of policies on jobs and will shed light on the actual size of the informal economy

Labour market in India

- India's labour market constitutes of over 470 million people.
- According to CRISIL, around 18 million people enter the workforce every year.
- As per the data with the NSSO, India had created around 59.9 million jobs between 1999-2000 and 2004-05 and created nearly two million jobs between 2004-05 and 2009-10. Between 2009-10 and 2011-12, 13.9 million jobs were created in the country.

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3.3   FSSAI issues draft regulations for organic food products

- Food regulator FSSAI has come out with a draft regulation for organic food products, seeking to ensure that these food items are actually organic.
- FSSAI's guidelines have been prepared in view of rising demand for organic food products.

Objective behind this the draft regulation

- Currently, a number of food products are being marketed as organic. However, consumers do not have any way to check the authenticity of organic food products due to lack of a regulatory framework. The draft regulation on organic food is aimed at overcoming this problem and ensuring that what is sold as organic food is really organic.

Key facts of the draft regulations

- Organic foods will have to comply with the provisions under the **National Programme for Organic Production (NPOP) administered by the government** or the **Participatory Guarantee System for India (PGS-India) run by the Agriculture Ministry** or any other standards notified by the food authority.
- The draft regulation mandates that labelling of organic foods should convey full and accurate information on the organic status of the product.
- Organic food products should also carry a certification mark or a quality assurance mark given by any of the notified certification bodies.
- The FSSAI's draft has exempted organic food marketed through direct sale by the original producer or producer organisation to the end consumer from verification compliance. However, this exemption does not apply to processed organic products.

Various definitions under the draft regulations:

Organic agriculture

- The FSSAI has defined 'organic agriculture' as a system of farm design and management to create an eco system of agriculture production without the use of synthetic external inputs such as chemicals, fertilisers, pesticides and synthetic hormones or genetically modified organisms.

Organic food products

- Organic farm produce means the produce obtained from organic agriculture, while organic food means food products that have been produced in accordance with specified standards for organic production.
- Organic food products are either that grown under a system of agriculture without the use of chemical fertilisers and pesticides or made from organically produced raw materials.

Food Safety and Standards Authority of India (FSSAI)

- The Food Safety and Standards Authority of India (FSSAI) is an agency of the Ministry of Health & Family Welfare, Government of India.

- The FSSAI has been established under the Food Safety and Standards Act, 2006 which is a consolidating statute related to food safety and regulation in India.
- The FSSAI is led by a non-executive Chairperson, appointed by the Central Government.
- The Chairperson is in the rank of Secretary to Government of India.
- The agency also has 8 regional offices, 4 referral laboratories and 72 local laboratories located throughout India.

Functions of FSSAI

- Laying down mechanisms and guidelines for accreditation of certification bodies engaged in certification of food safety management system for food businesses.
- Laying down procedure and guidelines for accreditation of laboratories and notification of the accredited laboratories.
- To provide scientific advice and technical support to Central Government and State Governments in the matters of framing the policy and rules in areas which have a direct or indirect bearing of food safety and nutrition.
- Collect and collate data regarding food consumption, incidence and prevalence of biological risk, contaminants in food, residues of various, and contaminants in foods products, identification of emerging risks and introduction of rapid alert system.
- Creating an information network across the country so that the public, consumers, Panchayats etc. receive rapid, reliable and objective information about food safety and issues of concern.
- Provide training programmes for persons who are involved or intend to get involved in food businesses.
- Contribute to the development of international technical standards for food, sanitary and phyto-sanitary standards.
- Promote general awareness about food safety and food standards.

3.4   Farm think tank's formula to redress agriculture distress

- The Indian Council of Food and Agriculture (ICFA), an agriculture think tank, has suggested to the Centre to consider its seven-point formula to redress farmers' distress across the country.

Important recommendations

- Assuring a decent income for the farmers was vital, and, therefore, the recommendations of the National Commission on Farmers (Swaminathan Commission) on the minimum support prices (MSP) for crops must be fixed at levels of at least 50% more than the weighted average cost of production. This will help enhance profitability in agriculture by ensuring a minimum of 50% profits over the cost of production.
- Opening of domestic and international markets for free trade is a major stabiliser of prices, which could help farmers in realising better profit prospects.

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- Operating futures markets across all farm produce as another effective strategy to offset the uncertainties associated with price fluctuations of agricultural commodities. Futures contract route helped farmers decide on trade for a standing crop at a future date at a price agreed before the harvest.
- Establishing a national network of Panchayat level rural growth centres that would create village-level agri-businesses and connect farmers with institutions, banks, technologies and markets.

3.5   Centre mulls financial assistance to fisherfolk

- The Centre plans to provide fisherfolk community financial assistance and introduce norms to improve labour conditions in the fisheries sector.
- However, it will ensure that the Indian fishing fleet does not engage in 'Illegal, Unreported and Unregulated' (IUU) fishing, according to the National Policy on Marine Fisheries, 2017.

Need for financial assistance

- Fishermen are having difficulties in availing institutional credit to buy fishing implements and crafts, and that the risky nature of returns has led to many fishermen falling into the debt trap of private financiers and middlemen.
- Currently, about four million people — mainly small-scale and artisanal fishers — in India depending on marine fisheries resources for livelihood.
- The Indian marine fisheries account for an economic wealth of about Rs. 65,000 crore. The policy is needed to guide the coordination and management of India's marine fisheries during the next 10 years.
- Therefore, the Centre, with the help of National Bank of Agriculture and Rural Development, will provide financial assistance to fishermen with liberal terms and conditions.

IUU Fishing

- IUU or **illegal, unreported and unregulated fishing** is fishing that is conducted contradictory to legal conservation and management measures currently in place around the world.
- IUU fishing includes all fishing that breaks fisheries laws or occurs outside the reach of fisheries laws and regulations.
- An important part of IUU fishing is illegal fishing, which usually refers to fishing without a license, fishing in a closed area, fishing with prohibited gear, fishing over a quota, or the fishing of prohibited species.

Problem of IUU Fishing

- Most of the world's fish is caught in the national waters of coastal States. Illegal fishing in such areas can range from a licensed vessel fishing more than its allowed catch to a vessel coming into the zone with no fishing license at all, or even a vessel crew not reporting or underreporting their catch—even if the vessel is licensed to catch that species.

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- A lot of unregulated fishing occurs on the high seas. The high seas are international waters beyond the exclusive economic zone, which extends 200 nautical miles from the shoreline, of a coastal state.
- Patchy regulation, little enforcement, and the vast expanse of the ocean—the high seas cover almost 45 percent of our planet—combine to allow rampant illegal and unregulated fishing in those areas.
- Even when unregulated fishing on the high seas does not break any national law, it can have a significant harmful impact on marine life in the world's oceans.

<u>Why does IUU fishing occur?</u>

Too many fishers chasing too few fish

- If fishing "capacity" is the ability of a vessel or fleet of vessels to catch fish, "overcapacity" means a level of catching power that exceeds what is needed.
- Currently the fishing industry has too much capital invested in vessels that it must operate to realize a return.

High and growing demand for seafood

- As world populations continue to soar, the demand for seafood, an attainable protein resource, increases, and fisheries stocks are harvested beyond their ability to sustainably reproduce.

Highly profitable

- IUU fishing is highly profitable so a strong economic incentive exists to participate.
- The complexity of the fishing industry and the many levels of organization involved leave it vulnerable to the influence of organized crime and corruption.
- Fishing vessels may also be used in activities such as drug or human trafficking.

<u>What are the results of IUU fishing?</u>

- IUU fishing can have far reaching consequences.

In the short-term,

- IUU fishing results in the unsustainable harvest of fish stocks and other marine wildlife, destruction of marine habitats, loss of fish for future harvest, loss of nutrition, and loss of income and employment for legitimate fishers.

In the long term,

- IUU fishing can deplete local, and potentially global, fish stocks to the point where they become commercially unviable or even push them to the brink of extinction.
- IUU fishing can also undermine labour standards, distort markets of legally harvested fish, and contribute to the loss of economic stability in developing coastal nations.

3.6   UPSC to share competitive exams scores online to boost hiring

- In a first, the Union Public Service Commission (UPSC) has decided to share online scores of candidates taking competitive exams.

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- This is part of the government's proposal to boost hiring by the private sector.

About the initiative

- The Commission has decided to disclose information like marks obtained and educational qualifications of candidates who appeared in the final stage of examination (interview) but were **"not recommended".**
- These details will be linked to the **Integrated Information System for Public Recruitment Agencies** — a dedicated website being developed by the National Informatics Centre (NIC).
- UPSC will be making a provision in the application form so candidates can either opt in or out of the disclosure scheme.

Excluded list

- Candidates taking tests for recruitment to the armed forces and those applying for limited departmental competitive examinations and the Central Industrial Security Force will not be covered under the disclosure scheme.

Significance

- The publicly available scores will act as a useful database to other employers to enable them to identify good, employable candidates

Background

- Last year, NITI Aayog had recommended to the government to disclose scores and ranking of candidates in recruitment examinations to boost job opportunities for the unemployed.
- Similar idea was mooted by Prime Minister Narendra Modi in March last year to help the prospective employers to choose quality talent.
- The results of the government conducted entrance examinations for engineering and medical streams are already being utilized by private colleges for admission purposes.

3.7   Mission Retro-Fitment

- Minister of Railways Suresh Prabhu has launched Mission Retro-Fitment to enhance the passenger experience by upgrading the existing fleet of coaches.

Mission Retro-Fitment

- Mission Retro-Fitment is an ambitious program of the Ministry of Railways to upgrade the level of furnishing & amenities in the coaches of Indian Railways.
- The refurbished coaches will have better furnishing, aesthetics & amenities and better safety features which are aimed at providing a safe and comfortable travel to the railway passengers.
- Under Mission Retro-Fitment, 40,000 coaches will be refurbished and retrofitted in the next five years. The mission aims to induct about 40,000 coaches with upgraded interiors by 2022-23.
- The mission will be one of the largest retro fitment projects in the world.
- The mission will be carried out without affecting the traffic operation.
- It is estimated that cost of refurbishing per coach to be approximately Rs 30 lakhs.

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Features of the refurbished coaches will be

World class ambience

- Panels without visible screws, LED Lights, Modular toilets with concealed plumbing, Branded fittings, Powered venetian blinds, Anti-Graffiti coating, etc.

Enhanced Passenger Safety

- Fire and Smoke Detection System (in newly manufactured AC coaches), Double acting compartment door (in AC coaches), Rounded edges at most locations for injury-free, etc.

Caring for the Environment

- Bio toilets

Use of better materials

- Such as Polycarbonate ABS, Advanced Composites, Glass Fibre Reinforced Plastic, GFRE, Stainless Steel, etc.

Enhanced Passenger convenience

    Passenger Address & Passenger Information System, Braille Signage, Ergonomic design, increased number of mobile / laptop charging points, etc.

3.8   Labour meet to focus on social security

- The Standing Labour Committee will shortly meet to decide the agenda of the Indian Labour Conference (ILC), also known as the 'labour parliament' of the country.
- Providing social security cover for the entire workforce may be the central theme of the upcoming 47th ILC.
- The Labour Ministry had earlier this year proposed a law on social security which will provide social security cover to the entire workforce in the country, including self-employed and agricultural workers.
- As per the proposed social security code, factories employing even a single worker will have to contribute towards social security benefits.

Indian Labour Conference

- The ILC is the apex level tripartite forum in the Labour Ministry which includes representatives from trade unions, employers and state governments.
- It advises the Government on the issues concerning working class of the country.
- As recommended by the National Labour Conference held in September 17-18, 1982, only Trade Union Organisations, which have, a membership of more than five lakhs spread over four States and four industries are given representation in the ILC.
- All the 12 Central Trade Union Organisations, Central Organisations of employers, all State Governments and Union Territories and Central Ministries/Departments concerned with the agenda items, are the members of the ILC.

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3.9   Orderly system: claims and counter-claims

What is Orderly System in the police?

- The orderly system in the police was introduced by the British in the late 19th century.
- An orderly is expected to help officers in maintenance and upkeep of uniform, answering telephone calls, attending to personal security and also run small errands.
- Under the orderly system, a police officer is expected to be on duty 24X7 and to rush to scenes of crime and riots at short notice.
- Since the orderly is a trained uniformed person, he is meant to be a companion and help to the senior officer.
- The Karnataka Police Manual as well as those in other states prescribes the scale of orderlies for senior officers.

Misuse of the orderly system:

- Though the Manual says that orderlies must be taken from armed units, many civil police constables are also orderlies. These orderlies rarely attend drill and inspections and work at residences of senior officers.
- Over a period of time, orderlies began to be misused for cooking, washing, taking officer's children to school, shopping for the officer's family etc. An orderly thus became more of a menial servant.
- A few decades ago, the minimum qualification prescribed for an armed police constable was seventh standard. Nowadays, almost every constable is a graduate and has joined the department with some aspirations. To him, performing orderly duty at the residence of a senior officer has become anathema.
- Thus, the demand for abolishing the orderly system was raised.

Why in news?

- Three months after the Karnataka government abolished the colonial-era orderly system, the practice is still prevalent in the police force.

Why the Karnataka state government abolished it?

- In March 2017, the Karnataka state government had issued an order scrapping the orderly system with an amendment to provide allowances to officials to employ Group D workers to replace orderlies.
- Before the March 2017 order was issued, as many as 3,000 trained personnel were working as orderlies across Karnataka, not only in the houses of senior police officials but also with senior bureaucrats and elected representatives.
- Prior to the ban, Rule 862A of the Karnataka Police Manual allowed police officials — depending upon their rank — to employ orderlies from the lower rank personnel as domestic help.
- However, considering that trained armed personnel were being deputed as orderlies when they could otherwise be deployed to help maintain law and order, the then State Police proposed that the system be scrapped.

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- The move was backed by several human rights organizations.

3.10   National Mission on Cultural Mapping of India

- Government of India is launched the implementation of the '"National Mission on Cultural Mapping of India" at Goverdhan Block, Mathura District, Uttar Pradesh.
- This Mission is part of the 'Ek Bharat Shreshtha Bharat' umbrella.
- Ministry of Culture launched it in the year of commemoration of the birth centenary of Pandit Deen Dayal Upadhyay, who hailed from Mathura.

National Mission on Cultural Mapping of India:

- The mission aims at converting the vast and widespread cultural canvas of India into an objective cultural map, designing a mechanism to fulfil the aspirations of the whole artist community of the nation and preserving the rich cultural heritage of this country in the form of a cultural repository of artists and art forms.
- This Mission encompasses data mapping, demography building formalising the processes and bringing all the cultural activities under one web based umbrella for better results.
- The Mission also seeks to open a direct channel of communication of artists with the Government and peer to peer communication among artists for talent honing and handholding of each other.

Ek Bharat Shreshtha Bharat

- "Ek Bharat Shreshtha Bharat" was announced by Hon'ble Prime Minister on 31st October, 2015 on the occasion of the 140th birth anniversary of Sardar Vallabhbhai Patel. Subsequently, the Finance Minister announced the initiative in his Budget Speech for 2016-17.
- It was launched to celebrate the cultural vibrancy of India while establishing a concrete mechanism to inculcate nationalism and cultural awareness among the fellow citizens of our nation.
- All States and UTs will be covered under the programme. There will be pairing of States/UTs at national level and these pairings will be in effect for one year, or till the next round of pairings. The State/UT level pairings would be utilized for state level activities. District level pairings would be independent of the State level pairings.
- The activity will be very useful to link various States and Districts in annual programmes that will connect people through exchanges in areas of culture, tourism, language, education trade etc. and citizens will be able to experience the cultural diversity of a much larger number of States/UTs while realising that India is one.

Objectives of Ek Bharat Shreshtha Bharat

- **To CELEBRATE** the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country;

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- **To PROMOTE** the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States;
- **To SHOWCASE** the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity;
- **TO ESTABLISH** long-term engagements and
- **TO CREATE** an environment which promotes learning between States by sharing best practices and experiences.

3.11   India has second highest number of obese children in world: Study

- According to a study, India has the second highest number of obese children in the world after China.

Highlights of the study

- The study found that 14.4 million kids in India have excess weight.
- Globally, over two billion children and adults suffer from health problems related to being obese, and an increasing number die from these conditions.
- However, of the four million deaths attributed to excess body weight in 2015, nearly 40% occurred among people whose body mass index (BMI) fell below the threshold considered "obese".
- Among the 20 most populous countries, the highest level of obesity among kids and young adults was in the US at nearly 13%; Egypt topped the list for adult obesity at about 35%.
- Lowest rates were in Bangladesh and Vietnam, respectively, at 1%.
- China with 15.3 million and India with 14.4 million had the highest numbers of obese children; the US with 79.4 million and China with 57.3 million had the highest numbers of obese adults in 2015.
- The prevalence of obesity has doubled since 1980 in more than 70 countries and has increased in most other nations.
- Although the prevalence of obesity among children has been lower than among adults, the rate of increase in childhood obesity in many countries was greater than that of adults.

3.12   Fortified foods to tackle malnutrition

- To tackle the issue of malnutrition, the Food Safety and Standards Authority of India (FSSAI) released a set of standards and a logo last year. Since then, a number of enterprises have begun adding premixes of micronutrients to launch fortified foods.

Various efforts in this regard

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- Milk cooperatives in Haryana, Punjab, Rajasthan, Assam and Maharashtra are fortifying their products.
- Targeting children, the Rajasthan, Madhya Pradesh, Haryana and Himachal Pradesh governments have begun using fortified oil for their mid-day meal schemes.
- West Bengal and Andaman and Nicobar Islands are now distributing fortified wheat flour through the public distribution system, and the Maharashtra government has started a pilot project.
- The FSSAI is also working with small local suppliers, for instance local flour grinding mills, to get them to add premixed micronutrients.

Food fortification

- Food fortification or enrichment is the process of adding micronutrients (essential trace elements and vitamins) to food.
- Fortification requires neither changes in existing food patterns, habits nor individual compliance.
- It is socio-culturally acceptable and does not alter the characteristics of the food.

Benefits of Food fortification

- Food fortification is a proven and effective strategy to meet the nutritional needs of a large number of people across various sections of the society, including the poor and underprivileged as well as the vulnerable, such as pregnant women and young children.
- It can be introduced quickly and can produce nutritional benefits for populations in a short period of time.
- It is safe and cost effective, especially if advantage is taken of the existing technology and delivery platforms.
- Food fortification reinforces and supports existing nutrition improvement programmes and is part of a broader, integrated approach to prevent micronutrient deficiencies, thereby complementing other approaches to improve health and nutrition.

Regulations on Food fortification in India

- Food Safety and Standards Authority of India (FSSAI) has formulated a comprehensive regulation on fortification of foods namely 'Food Safety and Standards (Fortification of Foods) Regulations, 2016'.
- These regulations set the standards for food fortification and encourage the production, manufacture, distribution, sale and consumption of fortified foods.
- The regulations also provide for specific role of FSSAI in promotion for food fortification and to make fortification mandatory. This sets the premise for the national summit on fortification of food.

3.13   Derby Air-to-Air Beyond Visual Range Missile

- Tejas, the Light Combat Aircraft has successfully test fired Derby Air-to-Air Beyond Visual Range (BVR) missile in RADAR guided mode.

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- The test was performed on a Manoeuvrable Aerial Target at the Interim Test Range (ITR), Chandipur.
- The objective behind the test was to assess the Derby integration with aircraft systems on-board Tejas including the aircraft avionics, fire-control radar, launchers and Missile Weapon Delivery System and evaluate its performance.
- Debry is developed by Israeli defence company Rafael Advanced Defense Systems to meet the combat needs of the armed forces.
- Tejas, the Indian Light Combat Aircraft is the world's smallest, light weight, multi-role combat aircraft in its class amongst modern supersonic aircraft.
- It is a single seat, single jet engine developed by Hindustan Aeronautics Limited for the Indian Navy and the Air Force.

3.14   Odisha's Sualgiri, Swalgiri communities notified as Scheduled Castes

- Odisha's Sualgiri and Swalgiri communities were notified as Scheduled Castes following President Pranab Mukherjee's assent to a new law.
- The Scheduled Castes category status will entitle these communities to reservation in government jobs and admission in educational institutions, along with other financial benefits.

3.15   India Exclusion Report (IXR)

- According to the 2016 India Exclusion Report (IXR) released by the Centre for Equity Studies (CES), in terms of exclusion from access to public goods, Dalits, Adivasis and Muslims continue to remain the worst-hit communities.
- The report has found out that the same historically disadvantaged groups such as Dalits, Adivasis, Muslims, and persons with disabilities and age-related vulnerabilities continue to remain as the most severely and consistently excluded groups of the society.
- The 2016 IXR Report determines exclusion by taking into account four public goods, namely, pensions for the elderly, digital access, agricultural land, and legal justice for undertrials.

Highlights of the report
Weaker Class

- Disadvantaged groups in India – Dalits, tribals, elderly, disabled – continue to be excluded from four key basic public goods like pensions, digital access, land, labour & resources and legal justice.

Rich & Poor

- Since liberalization, while the country grew three-fold in the first four decades since Independence, rate of poverty fell only marginally to 0.65 percent between 1990 and 2005 from 0.94 percent between 1981-1990.

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- The economic growth also led to a 12-fold increase in wealth for the richest 10 percent since 2000. However, for the poorest 10 percent, income increased just three-fold leading to low levels of job creation.

Land holdings

- With the respect to the criteria of agricultural land as a public good, the report has found that the landowners to be invariably belonging to the upper castes, cultivators to be belonging to the middle castes.
- Dalits and Adivasis remain largely as the agricultural workers and landlessness was highest among Dalits (57.3%).
- Also, 52.6% of Muslims and 8% of women-headed households were landless.
- In addition, Adivasis constituted around 40% of all those displaced by the developmental activities.

Land reforms

- Land reform efforts have not benefited Dalits, women or Muslims significantly.
- The land holdings of Dalits, Muslims and women were found to be meagre in size.
- Also, the Land allotments to SC/ST households were not implemented efficiently.

Jobs in India

- Job creation fell to 1.35 lakh new jobs in 2015.
- Very few jobs have been added, mostly of low quality, whereas employment opportunities in public enterprises, the formal private sector, and agriculture actually declined.
- From 1999-2000 to 2009-2010, employment growth was hardly 1.5 percent. This is when India's economy grew 7.52 percent per annum.
- Only 2.7 million jobs were added in the period during 2004–10, compared to over 60 million during the previous five-year period.

Digital exclusion

- Even though India has been ranked among the top five nations in terms of the number of internet users, almost 1.063 billion Indians were found to be offline.
- Poverty and geographic location to be the two major barriers to digital access.
- Problems like poor infrastructure, inadequate institutional frameworks, low literacy in the targeted areas, and poor cooperation from government officials are the major reasons behind poor implementation of government schemes aimed at enhancing digital access.
- The report has also cited the reluctance on the part of government to be a signatory to a non-binding UN Human Rights Council resolution to protect human rights on the Internet.

3.16   Start-up firms may get idle land from PSUs

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- The Heavy Industries Ministry is deliberating on a proposal to use large tract of unutilised land owned by central public sector companies, which government plans to divest or sell, as ready-to-move-in industrial space for start-up companies.
- The idea is to "create a landscape for ready-to-move-in businesses" so that start-up companies do not have to face hurdles for setting up business and they can start work "immediately on the business opportunity without lag.
- Various companies under the government of India are sitting over huge tracts of land. Instead of transferring land to other public sector units and state governments, it could be utilised to create industrial space for start-up companies.
- These lands will be readily available to companies looking to set up quickly. Land acquisition is one of the biggest problems for the enterprises.

3.17 Voluntary unemployment rising

- NITI Aayog member Bibek Debroy has flagged a dramatic rise in voluntary unemployment across the country, where people choose not to work below a certain income level after 'investing' in education.
- The trouble with current official data on labour and employment is that they can be used to claim 'jobless growth' as well as 'growth-less jobs' — and fail to capture the pre-dominantly informal and unorganised nature of the Indian economy.
- In reality, India needs to create 10 to 12 million new jobs.
- This remark assumes significance as a task force led by the Aayog vice chairman Arvind Panagariya was recently formed on employment data.
- While the government attaches highest priority to job creation, policy making and analysis is conducted in a data vacuum, so the task force has been tasked with coming up with reliable and timely data solution for tracking employment trends.

3.18   Swachh Survekshan-2017

- Union Urban Development Miniser M Venkaiah Naidu announced the results of Swachh Survekshan 2017 survey.

Swachh Survekshan 2017 survey:

- Swachh Survekshan-2017 was commissioned by the Ministry of Urban Development during January– February, 2017.
- Swachh Survekshan 2017 aimed at capturing the outcomes on ground of the ongoing efforts to make urban areas Open Defecation Free and to improve door-to-door collection, processing and disposal of Municipal Solid Waste. Accordingly, it is outcome oriented.
- The survey was conducted by the Quality Council of India.

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- Under the Swachh Survekshan 2017, 434 cities and towns were surveyed for cleanliness and categorized based on the marks scored by each of them.
- It deployed 421 assessors for on the spot assessment of 17500 locations in 434 cities and towns. Another 55 persons regularly monitored the survey process in real time.

Criteria for Swachh Survekshan 2017

- Solid Waste Management including Door-to-Door collection, Processing and Disposal (45% of total 2,000 marks i.e. 900 marks)
- Citizen feedback (30% i.e. 600 of total marks)
- Independent observation (25% i.e. 500 marks)

Highlights of the report

- Out of the 434 cities and towns, Indore in Madhya Pradesh was adjudged as the cleanest city. Gonda in Uttar Pradesh was adjudged as the least clean city.
- Four of the bottom 10 clean cities are from UP, two each from Bihar and Punjab and one each from Uttarakhand and Maharashtra.
- Gujarat, Madhya Pradesh and Andhra Pradesh account for 31 of the top 50 clean cities with 12 in Gujarat, 11 in MP and 8 in AP.
- Telangana and Tamil Nadu account for 4 cities each in top 50, followed by Maharashtra with 3.
- Chandigarh, Chattisgarh, Delhi, HP, Jharkhand, Karnataka, Sikkim and UP account for one city each in top 50 clean cities of the country.
- Rajasthan and Punjab have 5 towns each in the bottom 50, followed by Maharashtra-2 and one each from Haryana, Karnataka and Lakshadweep.
- Faridabad in Haryana has emerged as the 'Fastest Mover Big City'.
- At the national level, Tirupati was ranked the 'Cleanest Medium City' while Ambikapur, Chattisgarh bagged this honour in Small Cities category.
- Rewa, Madhya Pradesh emerged as the 'Faster Mover' in medium cities category, Khargone, Madhya Pradesh moved the fastest by significantly improving it's rank this year over that of 2014 Survey in small cities category.

3.19   Set up database of children in orphanages, SC tells govt.

- The Supreme Court has passed a slew of directions, including setting up of a database of children living in orphanages and child care institutions to ensure their safety and welfare.
- The verdict came on a PIL petition filed on the basis of a 2007 newspaper report alleging that orphanages in Mahabalipuram, Tamil Nadu, run by NGOs as well as government institutions, were reportedly involved in systematic sexual abuse of children.

Important directions:

- The Centre, States and union territories (UTs) should complete the registration of all child care institutions by year-end.

- The registration process should also include a database of all children in need of care and protection and update it every month.
- Authorities concerned should ensure confidentiality and privacy in maintaining the database.
- Every child in need of care and protection must not be necessarily placed either in a child care institution and alternative option like adoption and foster care could seriously be considered.
- The Union government and the governments of States and UTs must concentrate on rehabilitation and social re-integration of children in need of care and protection.
- Centre's schemes such as skill development and vocational training must be taken advantage of keeping in mind the need to rehabilitate such children.
- States and UTs should set up 'Inspection Committees' before July 31 to conduct regular inspections of child care institutions and prepare reports of such inspections so that the living conditions of kids there undergo positive changes.
- The first report after conducting the inspection should be filed before the government concerned by December 31.
- The process for preparing individual child care plans must be initiated immediately and an individual plan must be prepared for each child in each such centre on or before December 31.
- The process of conducting a social audit must be taken up in right earnest by the National Commission for the Protection of Child Rights as well as by each State Commission for the Protection of Child Rights.

3.20   Second Meeting of National Council of Senior Citizens (NCSrC)

- Minister for Social Justice and Empowerment chaired the recently held 'Second Meeting of National Council of Senior Citizens (NCSrC)' organized by the Ministry of Social Justice and Empowerment.

National Council of Senior Citizens

- An autonomous National Council for Senior Citizens **headed by the Minister for Social Justice & Empowerment** was set up to promote and co-ordinate the concerns of older persons.
- The council was originally known as National Council for Older Persons (NPOP). It was renamed in 2012.
- The Council includes representatives of relevant Central Ministries and the Planning Commission.
- Five States are represented on the Council by rotation.
- The Council is mandated to meet at least twice a year.

Members of the council

- The Minister for Social Justice and Empowerment is the Chairman and Minister of State (Social Justice and Empowerment) is the Vice-Chairman of the Council.

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- Other members of the Council includes Secretary (SJ&E), Joint Secretary (Social Defence), related central ministries such as Finance, Rural Development, Home Affairs, Law and Justice, Human Resource Development etc., National Commissions like NHRC, NCW etc., State Governments (on rotation), Oldest member of the Lok Sabha, Oldest member of the Rajya Sabha, along with representatives of Senior Citizens Associations, Pensioners' Associations, eminent senior citizens working on issues related to senior citizens etc.

Mandate of the council

- The mandate of the National Council of Senior Citizens is to advise the Central and State Governments on the entire gamut of issues related to the welfare of senior citizens and enhancement of their quality of life, with special reference to the following:
  1. Policies, programmes and legislative measures.
  2. Promotion of physical and financial security, health and independent and productive living.
  3. Awareness generation and community mobilization.

3.21   Scientists come up with easy-to-assemble toilet

- The CSIR-Structural Engineering Research Centre (SERC), Chennai, has developed a cost-effective toilet.
- The cost-effective toilet weighs less than 500kg and has a life of 25-30 years.
- It can be made in-situ and even assembled in under five hours.
- It has been built with the help of the **textile reinforced concrete (TRC) panels**.
- The TRC panels are manufactured using **textile reinforced concrete prototyping technology (TRCPT)**, an innovative all-in-one technology developed by CSIR-SERC, for which the Indian patent was applied for in 2014.
- The same panel can be used as doors, roofing, walls and even flooring.
- It is corrosion-free and depending on how it is fixed, can withstand wind. No mould is required to make these sheets that vary in thickness from 15mm to 25mm.
- These panels used in the toilets are non-load bearing ones, but load-bearing walls and panels too can be designed.
- For now, each toilet costs between ₹12,000 and ₹ 15,000. With **buildtex (textile used in building applications)** being manufactured in India, the cost is expected to come down further. Buildtex is also being used in roads to prevent water seepage, and for replacing roofing sheets.

3.22   New instructions issued on Certificate of Coverage (COC)

- To extend benefit to the international workers, the Ministry of Labour and employment has issued new instructions to all field functionaries regarding COC (Certificate of Coverage).
- Under this new law, the employer has been advised to submit the application form for COC one month in advance and COC is issued prior to departure of the employee from India.

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Certificate of Coverage (COC)

- A COC otherwise known as a 'detachment certificate' must be obtained by an international worker to avoid double coverage.
- A COC will be issued by the worker's home country's social security authority in accordance with the provisions of the relevant SSA.
- The COC serves as a proof of detachment on the basis of which exemption from social security contributions or social security taxes in the host country are available for the period of detachment.
- For example, an Indian national can apply for a COC from the Indian social security authorities before being deputed to Germany to work with an establishment to which the German social security regulations apply. This will exempt him/her from contributing to German social security for the period stated in the COC.
- **The Employees Provident Fund Organisation (EPFO)** has been authorized to issue the Certificate of Coverage to the employees posted to the countries having signed Agreement with the Government of India.

Challenges

- In India, a major challenge that was faced by an employer was the considerable time taken by the Provident Fund office to issue a CoC.
- Another common challenge was the incorrect details mentioned by the Provident Fund office on the CoC. These challenges were largely due to the old CoC application process.

3.23   NBT to host Panchayat Pustak Mela

- The National Book Trust (NBT) is planning to launch Panchayat Pustak Mela with the aim of organising regular book fairs in rural areas across the country.
- The main objective behind introducing this new scheme at the panchayat level is to encourage the growth of reading habit in villages.
- National Book Trust (NBT) is an Indian publishing house, founded in 1957 as an autonomous body under the Ministry of Education of the Government of India.
- NBT now functions under aegis of Ministry of Human Resource Development, Govt. of India.

3.24   National Medical and Wellness Tourism Board

- The Third Meeting of the National Medical and Wellness Tourism Board was recently held under the chairmanship of Dr Mahesh Sharma, Minister of State (Independent Charge) for Tourism and Culture.
- The National Medical and Wellness Tourism Board was constituted under the Chairmanship of the Minister for Tourism in October 2015 to provide dedicated institutional framework to take

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forward Medical Tourism and position India as competent and credible medical and well tourism destination.

3.25   Measurement of Liveability Index

- Ministry of Urban Development will launch measuring of Liveability Index of cities in the next month.
- The aim of the assessment will be to instill a sense of healthy competition among cities and towns in the country and to help them focus their attention on improving governance and infrastructure availability.
- The Ministry of Urban Development has already released a detailed document on "Methodology for Collection and Computation of Liveability Standards in Cities".
- The index will be based on indigenously evolved methodology.
- The index will measure the Liveability Standards of 140 cities including 53 cities with population of 1 million and above.
- To carry out the assessment, the Ministry has invited bids for selecting the agency.
- Cities will be assessed on 15 core parameters relating to Governance, social infrastructure pertaining to education, health and safety and security, economic aspects and physical infrastructure like housing, open spaces, land use, energy and water availability, solid waste management, pollution etc.
- Totally, based on 79 aspects, the Cities would be ranked on the Liveability Index.

3.26   In a First for a Government Owned Company appoints Transgenders

- Kochi Metro will employ 23 members from the transgender community.
- This is the first time a government owned company has formally appointed members of the transgender community.
- While the better educated workers would be posted at ticket counters, the rest will be deputed for housekeeping works, customer relations, parking, gardening and to man the coach-depot canteen.
- All of the workers have been appointed after written test and interview and have been imparted training in soft and technical skills.

3.27   Govt announces steps to curb online child sexual abuse

- To curb the menace of Child Sexual Abuse Material (CSAM), the government announced immediate measures.

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- These measures have been taken on the basis of consultations of an inter-ministerial committee that includes Ministry of Home Affairs, Ministry of Electronics and Information Technology (MEITY), Ministry of Law, Ministry of External Affairs and the Department of Telecom.

Background

- The Ministry of Women and Child Development has been making several efforts to deal with the problem of online Child Sexual Abuse Material (CSAM).
- In a major step, a stakeholder Consultation was held last year on this issue wherein it was decided that the Ministry will establish a National Alliance against Online Child Sexual Abuse and Exploitation, focusing primarily on the online content.
- Subsequent to this decision, the inter-ministerial committee was constituted on request of the WCD Ministry, subsequent to its last year's decision of establishing a national alliance against online exploitation.

What are the interim measures?

- These interim measures were taken by the Ministry of Electronics and Information Technology (MEITY) in collaboration with Ministry of Women and Child Development.
- Under the interim measures, the Internet Service Providers (ISPs) will be required to adopt and implement the Internet Watch Foundation (IWF) Resources by 31st July.
- The IWF maintains a dynamic global list of websites and URLs, which contain CSAM. The implementation of IWF Resources will result in the relevant content being blocked/removed on an ongoing basis.

3.28   Anuyatra campaign

- It is a campaign for persons with special needs launched by the Kerala state government.
- The innovative initiative is aimed at transforming the state to a disabled-friendly one and empowers differently-abled children by bringing them to the forefront of the mainstream society.
- A group of differently-abled children who received special training in magic, have become brand ambassadors of Anuyatra.
- The MPower programme managed by the Kerala Social Security Mission (KSSM) under the social justice department is being implemented in collaboration with the Magic Academy.

3.29   51 EMR Schools made Functional during The Last three years

- Ministry of Tribal Affairs has actively initiated various efforts during the last three years to make more **Eklavya Model Residential Schools (EMRS)** functional.

Fact-sheet

- As a result, 51 new EMRS were made functional during the last three years.
- 161 EMR Schools are functional right now, while this figure was at 110 in the year 2013-14.
- More than 52 thousand tribal students are taking education in 161 EMR Schools of 26 States.

- In order to further educational opportunities for more ST children, Government has sought to extend the facility of EMRSs in all the 672 Blocks where ST population is more than 50% of the total population in a span of next five years.

Eklavya Model Residential Schools (EMRS)

- Eklavya Model Residential School Scheme was started in 1998 and first school was started in the year 2000 in Maharashtra.
- EMRSs have been functioning as institutions of excellence for tribal students.
- A total of 259 schools have been sanctioned during the last 17 years, out of which, 72 EMRS were sanctioned during last three years.
- As per existing EMRS Guidelines of 2010, at least one EMRS is to be set up in each Integrated Tribal Development Agency (ITDA) / Integrated Tribal Development Project (ITDP) having 50% ST population in the area.
- The capital cost for setting up the school complex, including hostels and staff quarters etc. has been earmarked at Rs. 12 crore with a provision to go up to Rs.16 crore in hill areas, deserts and islands.
- Recurring cost during the first year for these schools would be Rs. 42000/-per child, with a provision of raising it by 10% every second year to compensate for inflation etc.

Objectives of EMRS

- The objective of EMRS is to provide quality middle and high level education to Scheduled Tribe (ST) students in remote areas, not only to enable them to avail of reservation in high and professional educational courses and as jobs in government and public and private sectors but also to have access to the best opportunities in education at par with the non ST population.
- This would be achieved by:
- Comprehensive physical, mental and socially relevant development of all students enrolled in each and every EMRS. Students will be empowered to be change agent, beginning in their school, in their homes, in their village and finally in a larger context.
- Focus differentially on the educational support to be made available to those in Standards XI and XII, and those in standards VI to X, so that their distinctive needs can be met,
- Support the annual running expenses in a manner that offers reasonable remuneration to the staff and upkeep of the facilities.
- Support the construction of infrastructure that provides education, physical, environmental and cultural needs of student life.

3.30   Ratification of core ILO Conventions on Child Labour

- India has ratified two key ILO conventions on child labour concerning the elimination of child labour, the Minimum Age Convention (No 138) and the Worst Forms of Child Labour Convention (No 182).

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- India is the 170th ILO member state to ratify convention No 138 and 181st member to ratify convention No. 182.

1. Minimum Age Convention

- The Convention concerning Minimum Age for Admission to Employment, is a Convention adopted in 1973 by the International Labour Organization.
- It requires ratifying states to pursue a national policy designed to ensure the effective abolition of child labour and to raise progressively the minimum age for admission to employment or work.
- Countries are free to specify a minimum age for labour, with a minimum of 15 years. A declaration of 14 years is also possible when for a specified period of time.
- Laws may also permit light work for children aged 13–15 (not harming their health or school work). The minimum age of 18 years is specified for work which "is likely to jeopardise the health, safety or morals of young persons".
- Definitions of the type of work and derogations are only possible after tripartite consultations (if such a system exists in the ratifying country).

2. Worst Forms of Child Labour Convention

- The Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, known in short as the Worst Forms of Child Labour Convention, was adopted by the International Labour Organization (ILO) in 1999.
- By ratifying this Convention, a country commits itself to taking immediate action to prohibit and eliminate the worst forms of child labour.
- The ILO's International Programme on the Elimination of Child Labour (IPEC) is responsible for assisting countries in this regard as well as monitoring compliance. One of the methods used by IPEC to assist countries in this regard are Time-bound Programmes.
- The convention includes forms of child labour, which are predefined worst forms of child labour. They are also sometimes referred to as automatic worst forms of child labour.

International Labour Organization (ILO)

- The ILO is a United Nations agency dealing with labour issues, particularly international labour standards, social protection, and work opportunities for all.
- It was established in 1919 as an agency of the League of Nations and is headquartered in Geneva, Switzerland.
- India is a founder member of the ILO. At present, it has 187 members.
- The principal means of action in the ILO is the setting up of International standards in the form of Conventions, Recommendations and Protocol.
- So far India has ratified 45 Conventions, out of which 42 are in force. Out of these 4 are Core or Fundamental or Conventions.

3.31   12ᵗʰ June: World Day Against Child Labour

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- The World Day against Child Labour, which is held every year on June 12, is intended to foster the worldwide movement against child labour in any of its forms.
- 2017 theme: 'In conflicts and disasters, protect children from child labour'.
- The International Labour Organization (ILO), the United Nations body which regulates the world of work, launched the World Day against Child Labour in 2002 in order to bring attention and join efforts to fight against child labour.

3.32   Skill councils have conflict of interests

- The Government may soon review the public report of Sharda Prasad committee that suggested the challenges in vocational education and training system of the country and convergence, synergy and rationalization of sector skill councils (SSCs).
- The committee has advised the skill development ministry to drastically reduce the number SSCs from 40 to around 20 by merging identical sector councils and curtail their powers of assessment of skill training centers.
- It is because these SSCs are overlapping in nature, and were unnecessarily floated without giving proper thought, making it difficult to manage a large number of them.

SSCs

- Sector Skill Councils are set up as autonomous industry-led bodies by National Skill Development Corporation (NSDC).
- They create Occupational Standards and Qualification bodies, develop competency framework, conduct Train the Trainer Programs, conduct skill gap studies and Assess and Certify trainees on the curriculum aligned to National Occupational Standards developed by them.
- Till date, the NSDC Board has approved proposals for 38 Sector Skill Councils. There are approximately 450 Corporate Representatives in the Governing Councils of these SSCs.

3.33   EPFO e-court Management System launched

- EPFO e-court Management System is launched.
- The objective of this is a transparent and electronic case management system.
- All paper/evidence/documents can be filed online and the status can also be viewed online.

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4. NATURAL

4.1 First-ever Induction Training Programme for new recruits of Central Health Services (CHS)

- The first-ever induction training programme for the newly appointed General Duty Medical Officers (GDMOs) of the Central Health Service Cadre was recently inaugurated.
- This is the first time such a foundation training programme is being undertaken.
- The nine week course especially designed for the new recruits will enable the medical officers to broaden their knowledge base, confidence level and experience in public health facilities.

Need for training

- On an average, every year around 400 to 600 doctors are recruited through UPSC.
- Incidentally, throughout the under-graduate and post-graduate education and thereafter, these doctors are not been trained in the areas of management, supervision, leadership, communication, conduction of office procedures, etc.
- The training module is designed to fill this gap so that they can look after the administration of the organization and implementation of various national health programmes for which they have very limited exposure.

CHS

- Central Health Service (CHS) Cadre is a cadre governed by the Ministry of Health and Family Welfare.
- Its doctors are working all over the country providing health care services to a large number of people.
- CHS has four sub-cadres, namely, GDMOs, Teaching, Non-Teaching Specialists and Public Health, with a sanctioned strength of more than 4000 of which the GDMOs constitute the largest chunk, more than 2000.

4.2 Chenab to get tallest rail bridge

- Railways Ministry announced to build the world's highest railway bridge over the Chenab river in Jammu and Kashmir in around two years from now.
- This railway bridge is expected to be 35 metres taller than the Eiffel Tower of Paris.

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- The massive arch-shaped structure of bridge is already under constructed at a cost of around Rs 1100 crore in hostile terrain.
- Designed to withstand wind speeds of up to 260 km per hour, the bridge will connect Bakkal (Katra) and Kauri (Srinagar).
- The bridge forms a crucial link in the 111-km stretch between Katra and Banihal, which is part of the Udhampur- Srinagar-Baramulla rail link project.
- The bridge will be made of 63mm thick special blast-proof steel as the Jammu and Kashmir region is prone to frequent terror attacks.
- There will also be a ropeway in the bridge for inspection purposes.

Slated to be completed by the year 2019, the bridge is expected to become a tourist attraction in the region.

4.3   Ransomware: Alert sounded on malware

- The IT Ministry has reached out to key stakeholders like RBI, National Payments Corporation of India, NIC and UIDAI (Aadhaar) to advise them to protect their systems against 'WannaCry' ransomware to ensure that the digital payments ecosystem in the country is protected.
- The Ministry of Electronics and Information Technology has also instructed cyber security unit CERT-In to gather information of 'WannaCry' ransomware that has wreaked havoc across sectors like healthcare and telecommunications in more than 100 countries.

Ransomware

- Ransomware is a type of malicious software when infected restricts the user access until a ransom is paid to unlock it.
- Who is responsible for this attack?
- A cyber gang called Shadow Brokers, which is a mysterious organisation is held responsible for this massive cyberattack.

What did they do?

- The organisation has carried out the attack by stealing a hacking tool called 'Eternal Blue' from the National Security Agency (NSA), America's powerful military intelligence unit. The hacking tool Eternal Blue gives unprecedented access to all computers using Microsoft Windows. It was developed by NSA to gain access to computers used by terrorists and enemy states.

Consequences of this cyber-attack

- The cyberattack has crippled many hospitals, schools and universities in Europe and Asia. Britain's National Health Service (NHS) is among badly affected.
- Other affected high profile victims are international shipper FedEx Corp, Spain's telecommunications company Telefonica, Portugal Telecom and Telefonica Argentina, Germany's railway operator Deutsche Bahn etc.
- According to Avast, the countries such as Russia, Ukraine and Taiwan are the top targets around the world.

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- In India, Andhra Pradesh's police computers have come under the cyberattack. Computers in 18 police units in Chittoor, Krishna, Guntur, Visakhatpatnam and Srikakulam districts have been affected.

4.4   Panel to study free movement along Myanmar border

- The Union Home Ministry has constituted an expert committee to examine methods to curb the misuse of free movement along the Myanmar border.
- The committee would be headed by Rina Mitra, Special Secretary-Internal Security.
- The committee will examine the present rules and regulations adopted by the border States for implementation of free movement regime.
- The decision to constitute an MHA panel was taken at a meeting of chief ministers of the northeastern states which share a border with Myanmar.
- This is **for the first time that meeting with the state governments** has been called to discuss the issues concerning the Myanmar border.

Issue

- Indo-Myanmar border is unique in many ways as it has a visa-free movement regime for people living within 16 kms on either side of the border.
- They can stay up to 72 hours with effective and valid permits issued by the designated authority on either side.
- This regime has been in place keeping in view the traditional social ties among the border people.
- However, it is misused by militants and criminals who smuggle weapons, narcotics, contraband goods and fake Indian currency notes (FICN).
- Taking advantage of the free-movement regime, occasionally they enter India, commit crimes and escape to their relatively safer hideouts.

Note

- In the last few years, this is the second time a committee is being constituted to study the free movement across the Myanmar border. In 2015, a high-level committee submitted its report.
- The report suggested changing the "misnomer" related to "free border movement" and asked the government to replicate the model prevalent in villages and areas along the Bangladesh border.
- The report has suggested dedicated crossing points in border villages, where policemen would be made in charge of regulating the movement of people.
- India's 1,643-km border with Myanmar touches four states: Arunachal Pradesh, Nagaland, Manipur and Mizoram.

4.5   Buxa Tiger Reserve

- The Buxa Tiger Reserve is a 760-square-kilometre tiger reserve located inside the Buxa National Park in West Bengal.

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- It is in news as Six tigers would be relocated to Buxa Tiger Reserve (BTR) in north Bengal from neighbouring Assam as part of a plan for augmentation of tiger population in the reserve which was approved by the National Tiger Conservation Authority (NTCA).
- The forest department had taken up tiger augmentation plan in Buxa-Jaldapara for which detailed project report was prepared in consultation with Wildlife Institute of India and Global Tiger Forum.
- The Buxa Tiger Reserve is situated in the Buxa Hills of the southern hilly area of Bhutan.
- Northern boundary of Buxa Tiger Reserve runs along the international border with Bhutan.
- The Sinchula hill range lies all along the northern side of BTR and the eastern boundary touches that of the Assam state.
- It is the eastern most extension of extreme bio-diverse North-East India and represents highly endemic Indo-Malayan region.
- The fragile "Terai Eco-System" constitutes a part of this reserve.
- The Phipsu Wildlife Sanctuary of Bhutan is contiguous to the north of BTR.
- Manas National Park lies on east of BTR. BTR, thus, serves as international corridor for Asian elephant migration between India and Bhutan.

4.6   Bhitarkanika National Park

- Bhitarkanika National Park is located in Kendrapara district of Odisha in eastern India.
- It is in news as Bhitarkanika National Park authorities have imposed restrictions on entry of tourists into the park for three months to provide undisturbed environment for breeding by estuarine crocodiles.
- Bhitarkanika is one of the largest sanctuaries of crocodiles in the region with 1,671 reptiles.

4.7   Vidya-Veerta Abhiyan

- The Ministry of HRD has launched "Vidya, Veerta Abhiyan" to encourage varsities to display portraits of Param Veer Chakra-decorated soldiers.
- Universities and educational institutions across country will soon have a "wall of heroes", depicting portraits of soldiers who showed extraordinary courage in defending the nation.
- The idea of having a wall of martyrs in universities was first proposed by a group of ex-servicemen who said portraits of martyrs and tanks used in wars should be put on display in the campus to instill sense of "nationalism" and "patriotism" among the students.

4.8   Scorpenes to gain in endurance

- The Navy is planning to install Air Independent Propulsion (AIP) modules on all six Scorpene submarines to extend their endurance.

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- An AIP module is being developed by the Defence Research and Development Organisation (DRDO).

What is Air-independent propulsion (AIP)?

- Air-independent propulsion (AIP) is any marine propulsion technology that allows a non-nuclear submarine to operate without access to atmospheric oxygen (by surfacing or using a snorkel).
- AIP can augment or replace the diesel-electric propulsion system of non-nuclear vessels.
- It converts methanol-like substances to produce hydrogen, which is the fuel that runs the cell in producing electricity.
- While diesel engines need oxygen to function, these cells are air independent.

Significance of AIP

- AIP is a breakthrough technology for conventional submarines, enabling them to remain underwater three or four times a vessel's standard capacity.
- Notably, a submarine is about stealth. It is a weapons platform not visible to the naked eye. AIP significantly improves stealth because it enables a submarine to generate electricity for services and battery charging and propulsion while completely submerged.
- They enable conventional diesel-electric submarines to remain submerged for two to three weeks at a time.
- They generate electricity, powering a submarine's to operate and also generate oxygen, lighting and amenities for crew.
- The system also emits less noise, increasing its stealth – the most critical feature of a submarine.

Scorpene submarines

- The Scorpene submarines are designed to operate in all theatres, including the tropics.

They can undertake various types of missions like anti-surface warfare, anti-submarine warfare, mine laying, intelligence gathering and surveillance.

4.9   May 11: National Technology Day

- National Technology Day is being observed across India on May 11 to mark India's technological advancements.
- 2017 National Technology Day Theme: 'Technology for inclusive and sustainable growth'.
- The day is being commemorated to celebrate the anniversary of first of the five tests of Operation Shakti (Pokhran-II) nuclear test, held on 11 May 1998 in Pokhran, Rajasthan.
- The operation was led by the former President APJ Abdul Kalam. After conducting two more tests as a part of the Pokhran-II/Operation Shakti initiative, India was declared as a nuclear state by the then Prime Minister Atal Bihari Vajpayee.
- On this same day country's first indigenous aircraft Hansa-3 was test flown at Bangalore.
- India also conducted successful test firing of the Trishul missile on the same day. The Trishul missile was developed as a part of the Integrated Guided Missile Development Programme by the

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Defence Research and Development Organisation (DRDO). The Trishul Missile got inducted by the Indian Army and Indian Airforce.

- Considering all these technical achievements, 11 May was chosen to be commemorated as National Technology Day.
- To commemorate this day, Technology Development Board (TDB) has instituted a National Award. This award is conferred on to various individuals and industries by the President for their successful achievement in commercialization of Indigenous Technology.

4.10   Rail regulator to define performance standards

- As per a resolution approved recently by the Railways Board, India's first rail regulator, Rail Development Authority (RDA), would not just look at tariff structures for passenger and freight operations but also set standards of performance and efficiency that would be enforceable under the Railways Act.

Functions and powers of RDA, as per resolution

- The resolution authorises RDA to define standards of performance and efficiency; such standards would be notified as rules under the Railway Act to give a binding force upon acceptance.
- It will also be "authorised to check for deviations and suggest remedial measures."
- The regulator will also provide guidance on quantity and quality of service provided to passengers. These may include setting standards including hours of service, frequency of trains, capacity per coach, cleanliness level, and quality of water, food, furnishing and linen.
- The regulator will, however, not involve itself in policy making of the Indian Railways, operations and maintenance of the rail system, financial management, setting technical standards and compliance of safety standards.
- The regulator would only make recommendations on tariff and not impose a tariff on the Indian Railways.

RDA

- The Union Cabinet had approved setting up the rail regulator responsible for recommending passenger fares, setting performance standards for rail operations and creating a level playing policy for private sector participation.
- The RDA will be an independent body with separate budget. The independence is ensured through separate budget, appointment and removal process.
- RDA will be based in Delhi with an initial corpus of Rs. 50 crore and will be set up through an executive order.
- The RDA will act within the parameters of the Railway Act, 1989 and only make recommendations to the Ministry which will take a final call on passenger and freight fares.

Composition of RDA

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- The Authority will have a Chairman and three members with a fixed term of five years and will be allowed to engage experts from various fields.
- The Chairman and members of the Authority will be appointed by a Search and Selection Committee headed by the Cabinet Secretary with members including the Railway Board Chairman, Department of Personnel and Training Secretary and Chairman of any regulatory body of the Central Government nominated by the Cabinet Secretary.

4.11   Northern Zonal Council meeting

- The 28th meeting of the Northern Zonal Council was recently held at Chandigarh under the Chairmanship of Shri Rajnath Singh, Union Home Minister.

What was discussed?

- The Zonal Council discussed and deliberated upon 18 items of common interest among the member states.
- The major items discussed were 'Need for fiscal and infrastructural harmony in Northern States; Joint efforts for export of fruits, flowers and vegetables from the States; Sharing of Water of various rivers of the region and also hydropower among States.

Zonal Councils

- Zonal Councils are advisory councils and are made up of the states of India have been grouped into six zones to foster cooperation among them. They are:
    1. Northern Zonal Council
    2. North-Central Zonal Council
    3. North-Eastern Zonal Council
    4. Eastern Zonal Council
    5. Western Zonal Council
    6. Southern Zonal Council
- Five Zonal Councils were set up vide Part-III of the States Reorganisation Act, 1956.
- The North Eastern States' special problems are addressed by another statutory body – The North Eastern Council, created by the North Eastern Council Act, 1971.
- The Zonal Councils are mandated to discuss and make recommendations on any matter of common interest in the field of economic and social planning, border disputes, linguistic minorities or inter-State transport etc.
- They are regional fora of cooperative endeavour for States linked with each other economically, politically and culturally.
- Being compact high level bodies, specially meant for looking after the interests of respective Zones, they are capable of focusing attention on specific issues taking into account regional factors, while keeping the national perspective in view.

- Northern Zonal Council consists of the States of Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, National Capital Territory of Delhi and Union Territory of Chandigarh.

4.12   No-fly list: Soon, unruly flyers could be grounded for up to 2 yrs

- The government plans to empower domestic airlines to ban unruly passengers for up to two years.
- In this regard, the civil aviation ministry has released draft rules for a "national no-fly list" of rowdy passengers — the first of its kind in the world — which allow an airline to bar an individual from three months to a maximum of two years, depending on the nature of the offence.

Three levels of disruptions:

The ministry has categorised "disruptions" by flyers into three levels:

- Level 1 is for disruptive behaviour like physical gestures.
- Level 2 is for physically abusive behaviour like pushing, kicking, and sexual harassment.
- Level 3 for life-threatening behaviour and damage to aircraft operating systems.

Actions against disruptions

- For offences under level 1, a passenger can be grounded for three months, while for level 2 and level 3 offences, he or she can be banned for six months and two years, respectively.

Who can use these guidelines?

- International airlines, too, could use these guidelines if they wanted to. Airlines can ban a passenger from flying immediately but that passenger won't come on the national no-fly list immediately.

In case of injustice to passenger

What happens when a passenger feels that he has been wrongly barred from flying?

- To address this issue, the government has proposed to form two redress committees — at the airlines-level to be headed by a retired district judge, and at the national level with a retired high court judge as its head.
- All such grievances will be addressed within 10 days.

International conventions related to unruly passenger issues:

- Criminal offences committed on-board international flights are governed by the **Tokyo Convention 1963** (the Tokyo Convention).
- However, the Tokyo Convention failed to provide a suitable deterrent to unruly passengers. This rule had become outdated by the complex leasing agreements to which modern aircraft are subject.
- To address the increase in unruly passenger issues, the global airline lobby group the International Air Transport Association (IATA), conducted a detailed analysis of such incidents and, in 2009,

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made a formal request to the International Civil Aviation Organization (ICAO) to review and enhance the Tokyo Convention of 1963.

- In April 2014, the International Civil Aviation Organisation adopted an amendment to the Tokyo Convention, known as the **Montreal Protocol**.
- IATA urged India to ratify the Montreal Protocol 2014, which deals with the safety of flights and passengers.
- The Protocol requires the ratification, acceptance, approval or accession of 22 nations to take effect. At present, there are 30 signatories and eight ratifications and accessions.

Montreal Protocol 2014

- Montreal Protocol 2014 makes several key improvements to the Tokyo Convention that strengthen an airline's position when addressing unruly passengers. These include:
- The Protocol notably extends the jurisdiction to try the unruly passenger from the state of aircraft registration to also include the states in which the operator is located and that is the destination of the flight (including a state to which a flight may be diverted).
- This will greatly facilitate the prosecution of unruly passengers upon disembarkation.
- It also clarifies what constitutes unruly behavior by simply requiring reasonable grounds to believe that a serious offense has been committed. Such offenses include physical assault, or the threat thereof, and failure to follow crew instructions.
- Importantly, Montreal Protocol 2014 expressly recognizes an airline's right to seek compensation for expenses caused by unruly behavior.

4.13   Indian Navy ships; INS Karwar and Kakinada decommissioned

- Indian Naval Ships Karwar and Kakinada were recently decommissioned.
- INS Karwar (M67), was the first of the 'Natya' class minesweepers acquired from the erstwhile USSR. The ship operated from Vishakhapatnam till 2013 after which, the ship was based at Mumbai. INS Karwar had her motto 'Hamesha Tayyar'.
- INS Kakinada (M70), was the second of the same class. Like her sister ship, Kakinada also operated from Vishakhapatnam till 2013 before shifting base port to Mumbai.
- With the decommissioning of the two minesweepers, the Navy is now left with a fleet of four Soviet-origin minesweeping ships will also be decommissioned by the end of 2018.

4.14   Haryana House passes motion for separate HC

- Haryana Assembly has unanimously passed a resolution, urging the Parliament to effect an appropriate amendment in the Punjab Reorganisation Act, 1966 to provide for the creation of a separate High Court for the State in Chandigarh.

Why the Haryana Assembly needed for a separate HC?

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- While Haryana has completed 50 years of its existence as a separate state, a separate HC has still not been provided for the state. This has led to delays in the disposal of cases due to heavy workload in the common HC.
- Also, there are only 18 judges from Haryana against a total sanctioned strength of 85. There are 13 Judges from Haryana under direct quota drawn from advocates of the HC, against a sanctioned strength of 23, leading to under-representation of the advocates from Haryana.

4.15   Florence Nightingale Awards

- The President of India Shri Pranab Mukherjee conferred the Florence Nightingale Awards to 35 nurses from across the country on the occasion of International Nurses Day.
- The Florence Nightingale awards are given to the outstanding nursing personnel employed in Central, State/UTs.
- Nurses working in Government, Voluntary Organizations, Mission institutions and the private institutions can apply with the due recommendation of concerned State Government.
- The Florence Nightingale Awards carries Rs.50,000/- cash, a certificate, a citation certificate and a Medal.

4.16   Expedite work on Kishanganga Project: PMO directs power ministry and J&K government

- Notwithstanding Pakistan's challenge to Jammu and Kashmir's 330 mw Kishanganga hydro-electric project, the Prime Minister's Office (PMO) has directed the power ministry and the J&K government to expedite work on the two major Kishanganga transmission lines that are to be commissioned along with the first unit of the crucial project.
- Two transmission lines — the Kishanganga-Amargarh and the Amargarh-Wagoora lines — are to be commissioned by the power ministry.

Dispute over Kishanganga project

- Pakistan has been consistently objecting to the Kishanganga hydro-electric project which is to be completed by India in three units of 110MW each, the first of which is set to be commissioned in the coming months.
- Last month, India had put on hold a World Bank-facilitated initiative for water secretary-level talks with Pakistan in Washington, owing to differences of opinion on technical issues on the Indus river hydro-projects like Kishanganga.
- In January, Pakistan had reportedly asked India to suspend the ongoing construction of the Kishanganga project and asked the World Bank to set up a court of arbitration to mediate the dispute over the Indus Waters Treaty between India and Pakistan.

Kishanganga Hydroelectric Plant

- The Kishanganga Hydroelectric Plant is an $864 million dam which is part of a run-of-the-river hydroelectric scheme that is designed to divert water from the Kishanganga River to a power plant in the Jhelum River basin.
- It is located 5 km north of Bandipore in Jammu and Kashmir, India and will have an installed capacity of 330 MW.
- Construction on the project began in 2007 and is expected to be complete in 2016.
- Construction on the dam was temporarily halted by the Hague's Permanent Court of Arbitration in October 2011 due to Pakistan's protest of its effect on the flow of the Kishanganga River (called the Neelum River in Pakistan).
- In February 2013, the Hague ruled that India could divert a minimum amount of water for power generation.

4.17   Cabinet approves Vijayawada Airport as International Airport

- The Union Cabinet approved the declaration of Vijayawada Airport as International Airport, as per the provisions of Andhra Pradesh Reorganisation Act, 2014.
- An airport is declared as an International airport depending upon its traffic potential and demand from airline operators for the operation of international flights.
- The move will help enhance connectivity to the State capital. It will also expand the choice of services for the air travellers and that too at competitive costs.
- This will encourage more international passengers to visit the city thereby, boosting domestic and international tourism and the socio-economic development of Andhra Pradesh.

4.18   Army's Super – 40 initiative

- It is a coaching initiative by the Army that has been training local children to take Engineering Entrance Examination.
- The coaching is conducted at Srinagar by Army, its training partner Centre for Social Responsibility & Learning (CSRL) and **Petronet LNG**.
- Army's Super - 40 initiatives for coaching the J&K youth for Engineering Entrance Exams broke all previous records when 26 boys and two girls from the state cracked the IIT-JEE Mains Exam 2017.

4.19   Army brings back CASO as part of counter-terror operations in Kashmir

- The Army has decided to reintroduce **cordon and search operations (CASO)** as a "permanent feature" of its campaign against militants, nearly 15 years after the practice was abandoned.
- This feature will be majorly carried out in militancy-affected areas of South Kashmir.

Reason for the reintroduction

- The major objective behind the reintroduction of combing operations is to bring the situation in the Kashmir Valley under control.
- The recent decision to re-introduce CASO comes against the backdrop of the recent killing of unarmed Kashmiri Army officer Lieutenant Ummer Fayaz in Shopian by militants.
- In 2001, CASO was discontinued following large-scale opposition from the locals. However, after 2001, the operation was launched only on specific intelligence-based inputs. Moreover, it was felt that CASO had alienated the local population from the armed forces due to the various difficulties people faced during such operations.
- Recently, the Army, security forces and police had also carried out a massive cordon and combing operation in south Kashmir's Shopian district following the recent militant attacks on policemen and banking facilities. It was the first time in 15 years that the combing operation of this magnitude involving 4,000 troops was conducted by the security forces.

4.20   Aerotropolis to come up in Assam

- The Union Ministry of Civil Aviation has proposed to build an aerotropolis in Assam, which would bring huge benefits to the region in terms of civil aviation and air connectivity.
- An aerotropolis is an airport centric metropolitan hub where infrastructure and economy are all based on the access to the airport which serves as a commercial point like any traditional metropolis which contains a central city commercial core area and commuter-linked suburbs.

4.21   2,000-strong CoBRA force for Sukma

- The CRPF will soon deploy a fresh squad of about 2,000 commandos from its special guerrilla warfare **CoBRA (Commando Battalion for Resolute Action)** battalions in and around the Sukma district of Chhattisgarh to defang the Maoists and their arsenal.
- The paramilitary has prepared a blueprint to mobilise at least 20 to 25 companies of the CoBRA from their present locations in West Bengal, Bihar, Telangana and Madhya Pradesh to the Bastar region that has some of the worst Maoist violence-hit districts.
- Sukma and its adjoining areas have witnessed some of the deadliest ambushes on security forces recently like the one where 25 CRPF men were killed in the Burkapal area of the district on April 24.

CoBRA force

- COBRA (backronym for Commando Battalion for Resolute Action) is a specialised unit of the Central Reserve Police Force (CRPF) of India proficient in guerrilla tactics and jungle warfare.
- Originally established to counter the Naxalite problem, CoBRA is deployed to address any insurgent group engaging in asymmetrical warfare.
- Currently numbering ten battalions, CoBRA is ranked among one of India's more experienced and successful law enforcement units.

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4.22   "Southern Sojourn" and "Southern Jewels"

- The Indian Railway PSU, Indian Railway Catering and Tourism Corporation Ltd (IRCTC) has decided to start two new circuits of their flagship luxury train Maharajas' Express, this year.
- These two new trips have been named as "Southern Sojourn" and "Southern Jewels" which will cover prominent destinations in West and South India.
- The Southern Sojourn will cover Goa, Hampi, Mysore, Ernakulam, Kumarakom and Trivandrum.
- The Southern Jewels will cover Chettinad, Mahabalipuram, Mysore, Hampi and Goa.

4.23   'Second-tallest' flag post comes up in Kolhapur

- 300-foot flag post, said to be the country's second-tallest, was recently inaugurated at Kolhapur in western Maharashtra.
- Kolhapur Street Beautification Project (KSBP), a trust, has installed this flag post.
- The 360-foot flag post inaugurated on March 6 at Attari on Indo-Pak border is said to be the tallest in the country.

4.24   79th Armour Day

- The Armoured Corps celebrated its '79th ARMOUR DAY' on 01 May 17.
- The event commemorates the mechanization of the erstwhile Indian Cavalry on 01 May 1938, when the SCINDE HORSE became the first Indian Cavalry Regiment to stable its horses and convert to the Vickers Light Tank and Chevrolet Armoured Cars.
- Organized, equipped and trained to effectively accomplish assigned mission in all types of conventional operations in varied terrain, the Armoured Corps also contributes substantially to the Army's counter insurgency effort with a large representation in the Rashtriya Rifles and Assam Rifles.
- It has a standing Contingent in the UN Peace Keeping Mission in Lebanon as its representatives amidst the blue beret fraternity.

4.25   MoU moots ties with Mauritius Parliament

- India and Mauritius signed a pact to institutionalise cooperation between the parliaments of the two countries.
- The Memorandum of Understanding (MoU) was signed by Lok Sabha Speaker Sumitra Mahajan and her counterparts.
- The relations between the two countries are based on centuries of cultural, linguistic, social and spiritual links that transcend extraneous considerations.

4.26   Rail Connectivity for Chardham Pilgrimage

- The Indian Railways is taking the significant step to commence the Final Location survey for a single BG line rail connectivity for the Chardham Pilgrimage (Gangotri, Yamunotri, Badrinath & Kedarnath).
- It is a step towards the vision to link the Chardham pilgrimage centres through rail connectivity.
- Rail Vikas Nigam Limited (RVNL), a Public Sector Enterprise under Ministry of Railways has been entrusted to undertake the Final Location Survey for rail connectivity to Chardham Yatra via Dehradun & Karanprayag in the State of Uttarakhand.

4.27   Mobile App "Celebrating Yoga" Launched

- Minister for Science & Technology Dr. Harshvardhan has launched a Mobile App "Celebrating Yoga".
- The Mobile App has been developed by Department of Science & Technology, Ministry of Science & Technology on the occasion of International Yoga Day 2017.
- The aim of the app is to popularise Yoga and encourage people to practice yoga for a scientifically healthy living.
- The information gathered by the mobile app will be shared with the Ministry of AYUSH to complement its efforts.
- In 2015, the Department of Science & Technology (DST) had also launched a research programme "Science and Technology of Yoga and Meditation (SATYAM)" under its Cognitive Science Research Initiative (CSRI).

4.28   Flash mobs, mascots to create awareness about yoga

- The Central Council for Research in Yoga and Naturopathy (CCRYN) has launched a yoga awareness drive through mascots and flash mobs in the run-up to International Day for Yoga which is celebrated every year June 21.
- The mascots will connect with people by providing added entertainment and interactivity, especially at malls, public places and recreational tourist areas.
- Flash mobs of 'Yoga Dance' called YogMob are also being organised at public places.

4.29   Facebook Launches Express Wi-Fi in India

- Facebook launched Express Wi-Fi commercially in India.
- The Express Bill service will now be available via 700 hotspots across four states- Uttarakhand, Gujarat, Rajasthan and Meghalaya.
- For the purpose of launching Express WiFi in India, Facebook tied-up with Bharti Airtel for setting up an additional 20000 hotspots covering millions of Indians.

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- The commercial roll out of Express WiFi comes a year after Facebook pulled off the 'Free Basics' programme that drew severe criticism from advocates of net neutrality.

What is Express Wi-Fi?

- Express Wi-Fi is a part of Facebook's global initiative to expand internet connectivity.
- Apart from India, Express Wi-Fi services are currently active in Indonesia, Kenya, Nigeria, and Tanzania.
- It will complement mobile data offerings by providing a low-cost, high bandwidth service allowing users to get online for accessing apps, downloading contents amongst other things at affordable rates.
- Anyone will be able to access the Express Wi-Fi network by signing up with an Express Wi-Fi retailer and purchasing a daily, weekly or monthly data pack.
- They will then be allowed to browse by connecting to the Express Wi-Fi hotspot.
- Unlike Free Basics that provided access to selected websites for free, Express Wi-Fi works on a paid model and the access will not be restricted to any particular websites.

4.30   We Wear Culture' project

- Working with 183 renowned cultural institutions from around the world, including India, Google's project 'We Wear Culture' lets people explore the history of clothes dating as early as 3,000 years ago from the ancient Silk Road, to the courtly fashion of Versailles, to the unmatched elegance of the Indian Saree.
- The online project includes collections from Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS) and varied weaves from across India, from Gharchola to Patola to Temple to Ikat sarees, as it traces the story and importance of Indian textiles from ancient sculptures.
- The world fashion exhibit also showcases designs from north-eastern India including the weaves of tribes such as the Nagas, Meitis and the traditional attire from Meghalaya called 'Dhara' or 'Nara' worn by the Khasi women.

4.31   Bhishtis- the traditional water carriers

- Bhishtis are in news as they are fast vanishing from the streets of India's capital city of Delhi.
- They are a Muslim tribe or biradari found in North India, Pakistan and the Terai region of Nepal.
- They are also known as (Shaikh Abbasi) Dhund Abbasi and Saqqa.
- In Maharashtra, the tribe is often referred to as Pakhali.
- Bhishtis are the traditional water carriers. They have been supplying businesses, pilgrims and passersbys with swigs from their swollen canteens since the Mughals ruled India, an era before piped water sounded the death knell for their trade.

4.32   Darbar Move

- Leaders in Jammu and Kashmir have floated the idea of abrogation of the 146-year-old Dogra-era practice of 'Darbar Move'.
- Under this the State's civil secretariat shuttles between summer capital Srinagar and winter capital Jammu bi-annually. It was introduced by Maharaja Gulab Singh in 1872.
- Terming this as a costly affair, leaders have asked for bifurcation of the offices.
- Every year, over 7,000 employees of the civil secretariat shuttle between Srinagar and Jammu along with the files, which are ferried in buses and tracks. It costs the State over ₹40 crore.

5. INDIA AND WORLD

5.1   Netherlands backs UNSC, NSG bids

- The Netherlands has backed India's early entry into the NSG and other multilateral export control regimes like Wassenaar Arrangement and the Australia Group, and supported the country's bid for a permanent UN Security Council seat.
- The Netherlands' support came after Prime Minister Narendra Modi held talks with his Dutch counterpart, Mark Rutte.

Why India needs permanent membership?

- India is currently engaged in nuclear trade with international partners based on a waiver from the NSG in 2008.
- The waiver is in the form of a concession without according India the status of a full member and therefore has an element of unpredictability and attendant risks in the long run for India's long-term nuclear power programme.
- The NSG took a consensus decision in September 2008 to permit its members to engage in civil nuclear cooperation with India despite India not being a party to the Nuclear Non-Proliferation Treaty (NPT).
- Since then, India has been trying to upgrade the "waiver" into a full member status.

Benefits of full membership

- Full membership of the NSG would enable India to have enhanced and predictable global access to nuclear technology, fuel, materials and components required for our expanding civil nuclear programme.
- It would advance energy security, contribute to India's growth strategy based on clean energy to combat climate change, and strengthen global nuclear non-proliferation.
- The NSG will take up India's membership issue at its next plenary session in June 2017.

NSG

- Nuclear Suppliers Group (NSG) is a multinational body concerned with reducing nuclear proliferation by controlling the export and re-transfer of materials that may be applicable to nuclear weapon development and by improving safeguards and protection on existing materials.
- The NSG was founded in response to the Indian nuclear test in May 1974 to stop what it called the misuse of nuclear material meant for peaceful purposes.

Currently, it has 48 members and European Commission is its Permanent Observer.

5.2   29th India–Indonesia CORPAT

- The 29th India–Indonesia CORPAT has commenced at Port Blair under the aegis of Andaman and Nicobar Command.

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- It will demonstrate India's commitment to its ties with Indonesia and to maritime security in Indian Ocean Region (IOR).
- The two navies have been carrying out Coordinated Patrols (CORPAT) on respective sides of the International Maritime Boundary Line (IMBL) twice a year since 2002.
- The main aim of CORPAT is to keep the vital part of the Indian Ocean Region safe and secure for commercial shipping, international trade and legitimate marine activities.

5.3   India-Cyprus signed four agreements to boost the bilateral relations

- India and Cyprus signed four agreements to boost the bilateral relationship between the two countries.
- In addition to the four-agreements, the two nations also released a Joint Statement titled India-Cyprus Joint Statement.
- The agreements/MoUs were inked during the state visit of President of Cyprus Nicos Anastasiades to India.
- The signed agreements include:
  1. Executive Programme on Culture Education and Scientific Cooperation (EPCEC) for the year 2017-2020
  2. Work Plan under programme of Cooperation in the field of Agriculture for 2017- 18
  3. Merchant Shipping Agreement
  4. Air Services Agreement

5.4   India, UNOSSC launch partnership fund to promote sustainable development

- India and the United Nations Office for South-South Cooperation (UNOSSC) on 8 June 2017 launched a partnership fund to support the Sustainable Development Goals (SDGs) across the developing world.

India-UN Development Partnership Fund

- The India-UN Development Partnership Fund will implement country-level projects that are catalytic towards achieving the 17 Sustainable Development Goals of the 2030 Agenda.
- The initiative is aimed at reducing poverty and hunger, improving health, education and equality, and expanding access to clean water, energy and livelihoods.
- The fund will focus on Least Developed Countries (LDCs) and Small Island Developing States (SIDS).
- Initially, the fund will start with an initial contribution of USD 1 million for its first project Climate Early Warning System in Pacific Island Countries (CEWSPIC).
- CEWSPIC Project was formulated by India and the UN Development Programme in consultation with the governments of Cook Islands, Kiribati, Marshall Islands, Micronesia,

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Nauru, Solomon Islands and Tonga. The project will increase resilience to natural disasters in these seven Pacific island countries.

UNOSSC

- UNOSSC The United Nations Office for South-South Cooperation (UNOSSC) was established with an objective to promote, coordinate and support South-South and triangular cooperation across the world and within the United Nations system.
- UNOSSC has its genesis in 1974 when the United Nations General Assembly endorsed the establishment of a special unit to promote technical cooperation among developing countries within the United Nations Development Programme (UNDP).
- In 2012, the special unit was given the name United Nations Office for South-South Cooperation (UNOSSC) by the General Assembly through a resolution.
- UNOSSC receives policy directives and guidance from the General Assembly and through its subsidiary body, the High-level Committee on South-South Cooperation.
- UNOSSC submits its strategic planning frameworks to the UNDP, UNFPA and UNOPS Executive Board for approval and funding.
- The Director reports to the UNDP Administrator and has also been appointed Envoy of the Secretary-General on South-South Cooperation.

5.5   India, Netherlands sign 3 agreements

- During Prime Minister Narendra Modi's latest visit to Netherlands, both nations have signed three MOUs.
- This year, the two countries are celebrating 70 years of the establishment of Indo-Dutch diplomatic relations.

Three agreements include

- MOU on Cultural Cooperation,
- MOU on Water Cooperation
- Agreement on Amending Social Security Arrangement

India- Netherlands bilateral relations

- Indo-Dutch contacts go back to more than 400 years. Official relations, which were established in 1947, have been cordial and friendly.
- The two countries also share common ideals of democracy, pluralism and the rule of law.
- India's economic growth, its large market, its pool of knowledge workers are of interest to the Netherlands.
- The main plank of the bilateral ties has been the strong economic and commercial relations.
- Since the early 1980s, the Dutch Government has identified India as an important economic partner. The bilateral relations underwent further intensification after India's economic liberalization in the early 1990s.

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- **The Netherlands has the second largest population of people of Indian origin in Europe, next only to the UK.**
- A 225,000-strong Indian Diaspora (200,000 **Surinami-Hindustani community** and 25,000 NRIs/PIOs) is an important element that helps foster closer ties with the Netherlands.
- Water is a prime sector for cooperation between the two countries. During talks Modi referred to a joint water technology initiative, **Dutch Indian Water Alliance for Leadership Initiative (DIWALI).**
- Irrigation and water conservation are the areas where the two countries can boost cooperation.
- Netherlands is the 5th largest investment partner globally and in the last three years it has emerged as the 3rd largest source of FDI for the country.
- Europe is India's biggest trading partner and 20 per cent of India's export to Europe enters through the Netherlands.
- Both the countries have the potential to further collaborate in areas like water management; infrastructure, logistics, ports, highways; inland water transportation; ICT; biotech; agriculture, agro-processing, floriculture; creative design industry etc.

5.6   India to Skip OBOR summit in China

- Taking its protest over the China's controversial China–Pakistan Economic Corridor (CPEC), India boycotted China's high-profile Belt and Road (B&R) Forum.

Why?

- India skipped the meeting due to its sovereignty concerns over the USD 50 billion CPEC, which passes through Pakistan-occupied Kashmir (PoK).

India's concerns

- China-Pakistan Economic Corridor (CPEC) which is a 3000 km project connecting Pakistan's deep-water port Gwadar and China's Xinjiang falls under the OBOR initiative of China. The CPEC passes through Gilgit-Baltistan region of the Pakistan-Occupied Kashmir.
- The Chinese presence in the disputed region has raised sovereignty concerns for India.
- The Gwadar Port offers China to have its naval presence in the Arabian Sea and to the Indian Ocean. Already, China has plans to station its marines in Djibouti in Horn of Africa in Indian Ocean.
- The other projects under the OBOR in South and South East Asia also have security implications for India.
- Unlike India, none of the other countries have sovereignty related issues with OBOR initiative.

Apart from India, Bhutan will not participate in the forum as it has no diplomatic relations with China.

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5.7   Curious case of dip, rise in Indian seas

- A team of scientists have found decadal variations in temperatures of North Indian Ocean waters.
- The NIO consists of the Arabian Sea, the Bay of Bengal and part of the Indian Ocean up till the 5°S latitude.

Highlights of the study

- From 1993 to 2003 — the first decade when satellites started to consistently track the rise and fall of ocean heights and global temperatures soared — the North Indian Ocean (NIO) sea levels fell.
- After 2004, sea levels began an unprecedented, accelerated spike till 2014.
- This rise and fall was even as global temperatures steadily climbed and registered their largest two-decadal jump in more than a century.
- Such a "decadal swing" in the North Indian Ocean was unique and never observed in either the Pacific or Atlantic oceans.
- Wind flows, which welled warm water on the Indian Ocean surface, changed directions every decade and probably influenced sea level patterns. It could be that coming decades — in spite of rapid, rising temperatures — will see a fall in sea levels but that's still hypothetical.

Reasons for rise in sea level temperatures in NIO

- Sea levels primarily rise due to water expanding from atmospheric heat and, more water being added from, for instance, melting ice sheets and glaciers. In this case, 70% of the NIO's warming could be explained by expansion.
- Unlike the Pacific and Atlantic, the NIO is hemmed in all sides, except for an outlet on the southern side. This influenced the rate at which heat was absorbed and flushed out from within the system.
- This inter-decadal trend is an extremely important factor and underlines why we need to plan coastal management better.

5.8   Buddha Purnima/Vesak

- Vesak (Buddha Purnima, Buddha Jayanti) is a Buddhist festival that marks Gautama Buddha's birth, enlightenment and death.
- It falls on the day of the full moon in May. Interestingly, Buddha Purnima, celebrated in May every year, is even more special because the Buddha's enlightenment and mahaparinirvan also happened during the Purnima in the month of May.
- May 10, 2017 marks the 2561st Buddha Jayanti, the birthday of the Buddha, and Buddha Purnima.
- The United Nations has declared it an international holiday.

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- To mark the day that is also known as Vesak, in some countries such as Vietnam, China and Japan the Buddha's idol is bathed in water and flowers. It is more like an abhishekam popular in India.
- On this day, monks, or the Buddha's disciples, from Vietnam, Sri Lanka, Thailand and other countries gather to discuss world peace.

Bodh Gaya is the place where Gautama Buddha obtained the Enlightenment after many years of Tapa, Sarnath is the place where he first taught the Dharma, Lumbini is his birth place and Kushinagar is death place.

5.9   AUSINDEX-17

- Navies of India and Australia will participate in bilateral maritime exercise AUSINDEX-17 this week with an aim to enhancing interoperability and cooperation between the two forces.
- Indian naval ships **Jyoti, Shivalik and Kamorta** are on a port visit to Freemantle, Australia from June 13 to 17 and will join the exercise.
- This would be the second edition of the exercise with the maiden one having been conducted at Visakhapatnam in 2015.
- The exercise is aimed at increasing interoperability and is in consonance with the growing cooperation between the two countries.
- In April this year, Australian Prime Minister Malcom Turnbull visited India and held bilateral talks with Prime Minister Narendra Modi to enhance the partnership between the two countries.

In May this year, Singapore and India held a maritime bilateral exercise SIMBEX in the disputed South China Sea.

5.10   Xi evokes Panchsheel as India skips meet

- Despite India's decision to skip the two-day Belt and Road Forum (BRF), the once special relationship between New Delhi and Beijing echoed during the opening session of the conclave.
- Chinese President Xi Jinping proposed five principles of peaceful co-existence or Panchsheel — the brainchild of China, India and Myanmar in the 1950s — as the mantra for advancing the Belt and Road Initiative (B&RI), and as a vehicle for achieving sustainable globalisation.

Background

- India's had decided to boycott the BRF, as a mark of protest against the infringement of its sovereignty by the China- Pakistan Economic Corridor (CPEC) that passes through Pakistan-occupied Kashmir (PoK).
- India's decision to stay away has raised eyebrows here, as other countries such as Japan and Vietnam, which have serious maritime disputes with China, have sent high-level official delegations, to the BRF.

Panchsheel

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- The Five Principles of Peaceful Coexistence, known in Nepal and India as the Panchsheel Treaty, are a series of principles which formed the bedrock of the relationship between India and the People's Republic of China.
- Their first formal codification in treaty form was in an agreement between China and India in 1954.
- They were enunciated in the preamble to the "Agreement (with exchange of notes) on trade and intercourse between Tibet Region of China and India", which was signed in Peking on 29 April 1954.
- An underlying assumption of the Five Principles was that newly independent states after decolonization would be able to develop a new and more principled approach to international relations.
- This agreement stated the five principles as:
  1. Mutual respect for each other's territorial integrity and sovereignty.
  2. Mutual non-aggression.
  3. Mutual non-interference in each other's internal affairs.
  4. Equality and cooperation for mutual benefit.
  5. Peaceful co-existence.

5.11   Project "LOcal Treatment of Urban Sewage Streams for Healthy Reuse) (LOTUS HR)

- Department of Biotechnology (DBT) and NWO, the Netherlands Science Agency have announced a joint call for proposals for cleaning the Barapullah drain.
- Accordingly, work has begun on Cleaning the Barapullah Drain in New Delhi under the Project "Local Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS HR).

LOTUS HR

- The project Local Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS HR) is an Indo-Netherlands joint project funded by Department of Biotechnology(DBT), Govt of India and NWO/STW, The Govt of Netherlands.
- The project has stakeholders from both Academia and Industry from India and Netherlands.
- It is coordinated by Indian Institute of Technology (IIT), Delhi with participation of The Energy and Resources Institute (TERI), New Delhi and National Environment Research Institute, Nagpur from India while Technical University Delft is coordinating it from The Netherlands, with participation of Environmental Engineering and Water Technology Department, UNESCO, Wageningen University and its Aquatic Ecology Department.
- There is also commitment from industry, especially from The Netherlands, in terms of both cash and kind towards the project.

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- The project aims to demonstrate a novel holistic (waste-) water management approach, that will produce clean water that can be reused for various proposes (e.g. industry, agriculture, construction etc.), while simultaneously recovering nutrients and energy from the urban waste water, thus converting drain into profitable mines. Special attention will be paid to pathogen removal and removing conventional and emerging pollutants.
- The project will develop an innovative pilot scale plant, suitable to cope with Indian conditions in a location specific manner.
- The final design of the pilot plant will be scalable and modular, to fit into the highly populated urban terrain.

5.12 India wins stay at International Court of Justice in Kulbhushan Jadhav case

- India has received a stay order preventing Pakistan from executing the death sentence awarded to the former naval officer Kulbhushan Jadhav from the International Court of Justice at The Hague.
- India's team of lawyers led by senior advocate Harish Salve accused Pakistan of gross violations of international laws.
- They also pointed out the violations of the Geneva convention that deals with Consular relations.
- Pakistan had denied consular access to India despite 15 attempts. It also refused to give any details of Jadhav's arrest and trial until the death sentence was passed.
- India has rarely approached the ICJ especially when it comes to Pakistan. India is always hesitatant to "internationalise" its bilateral relations. But given the nature of Jadhav's case in which Pakistan refused to follow any established principle India was forced to take the extreme measure of taking the case to the ICJ.

International Court of Justice

- The International Court of Justice (ICJ) is the principal judicial organ of the United Nations (UN).
- It was established in June 1945 by the Charter of the United Nations and began work in April 1946.
- The seat of the Court is at the Peace Palace in The Hague (Netherlands).
- Of the six principal organs of the United Nations, it is the only one not located in New York (United States of America).
- Its official languages are English and French.

Composition

- The Court is composed of 15 judges, who are elected for terms of office of nine years by the United Nations General Assembly and the Security Council. It is assisted by a Registry, its administrative organ.

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Role of the court

- The Court's role is to settle, in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.

Jurisdiction

- As stated in the UN Charter, all 193 UN members are automatically parties to the Court's statute. Non-UN members may also become parties to the Court's statute.

- Once a state is a party to the Court's statute, it is entitled to participate in cases before the Court.

- However, being a party to the statute does not automatically give the Court jurisdiction over disputes involving those parties.

Nature of judgements

> Its judgments have binding force and are without appeal for the parties concerned.

5.13   Centre to raise with U.S. non-tariff barriers

- India is planning to take up with the Trump administration the "barriers" imposed by the U.S., which are hurting Indian goods exports to that country in sectors including agriculture, pharmaceuticals and other industrial products.

What are the U.S. "non-tariff/Sanitary & Phyto-Sanitary (SPS) barriers"?

- The U.S. "non-tariff/Sanitary & Phyto-Sanitary (SPS) barriers" include those imposed under laws concerning bio-terrorism, child-labour, national security, 'Buy America' norms preferring U.S.-made items and American suppliers in U.S. Government purchases, registration fee hikes (in sectors such as pharma), food safety as well as animal and plant health regulations.

Why India is opposing?

- The U.S. Department of Labor (DOL) has "arbitrarily" listed 23 items produced in India on the 'List of Goods Produced by Child Labour or Forced Labour' — which is in effect a ban on their import. Indian industry is worried as the reports that the DOL relies upon are "not always accurate."

- The U.S. Government measures envisaged within an initiative to counter potential terrorist threats to the international maritime container trade system. This included X-ray scanning of containers exported to U.S., a measure that would cause additional costs for Indian exporters across sectors.

- In addition, a law (the Trade Expansion Act of 1962 of the U.S.) allows American manufacturers to petition for curbing imports from third nations on national security grounds without providing proof from industry. This is a major Non-Tariff Barrier (NTB) of the U.S. affecting Indian exports across sectors as the law — allowing invocation of 'national security exceptions' without having to apply any detailed criteria — in effect restricts foreign competition.

Way ahead

- India will raise this issue soon after the new U.S. Trade Representative (USTR) takes charge.

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- This issue would also be on the agenda of the next India-U.S. Trade Policy Forum (TPF) — the main bilateral platform for discussing and resolving trade and investment issues. The date for the next TPF meeting will be fixed after the new USTR assumes office.

5.14 Cabinet approves cooperation between Indian and Japan on Railway Safety

- The Union Cabinet, presided by the Prime Minister Narendra Modi gave its ex-post facto approval to the signing the Memorandum of Cooperation (MoC) with Japan on Railway Safety.
- The MoC was signed in February 2017.
- The MoC also provide a platform for Indian Railways to interact and share the latest development and knowledge in the railway sector.

Highlights of the MoC

- Track Safety
- Latest technology related to railway track safety
- Rolling stock safety
- Any other relevant railway safety matter jointly determined by both the sides within the scope of the MoC with consideration for major railway accident preventions based on the analysis of accident causes.
    1. Cooperation under the MoC will involve: Dispatch of experts
    2. Training of core staff in Japan
    3. Sharing of information and best practices
- Facilitating the participation of other institutions, organization and ministries, including contribution of National Traffic Safety and Environmental Laboratory of Japan to Research Design and Standards Organisation, Ministry of Railway, Government of India (RDSO), subject to their respective national laws and regulations where appropriate and possible.

5.15 Dragon's shadow on the Chicken neck

With the Dragon breathing down land locked Sikkim's neck and unrest in the Hills of North Bengal, it is double trouble for India. Both the problems have cast a long shadow on the Chicken neck - a thin strip of land of immense strategic importance connecting the North Eastern states with the rest of India.

On the Sikkim front it all started in June with China expanding a road in the territory known as the Dokolam plateau - a tri-junction between India, Bhutan and China bordering Sikkim near the Nathula pass (14400 ft) region. While India calls this 89 sq km pasture land- Dokola, Bhutan refers to it as Dokolam and China as Donglang. China already has a road near Dokola and is trying to extend it southward towards Gamochen which is controlled by Indian troops. Interestingly Gamochen is the area from where the Jampheri ridge starts. Located at an elevation it is a very important strategic vantage point for the Indian Army.

China has used an 1890 treaty between Chinese Qing dynasty of British colonial leaders of India to justify its claim over Doklam. The treaty was formalised between Britain and Chinese kingdom. Ironically, it is being used by China to alter its boundary with Bhutan, which was not a signatory to the 127-year-old treaty. Tibet also did not sign the treaty. Britain officially negotiated on behalf of both India and the kingdom of Sikkim.

China has used 1890 treaty to justify its claim on Doklam tri-boundary referring to specifically mentioned Gipmochi which is same as Gyemochen. China says that Gyemochen is an established tri-boundary under the Sikkim-Tibet Convention.

But, Bhutan and India don't agree. Bhutan was the first to lodge protest against Chinese construction activities in Doklam tri-boundary area. It objected to road construction by China saying that Doklam belonged to China.

India, under its security arrangement with Bhutan stopped Chinese advance in the area and asked last month the People's Liberation Army of China to hold construction of road there.

The Doklam dispute

- Donglong (Doklam) is a tri-junction area near the Chumbi Valley, under China's control

- Bhutan claims sovereignty over it

- In the first week of June, China removed an Indian Army bunker in Sikkim, at the tri-junction

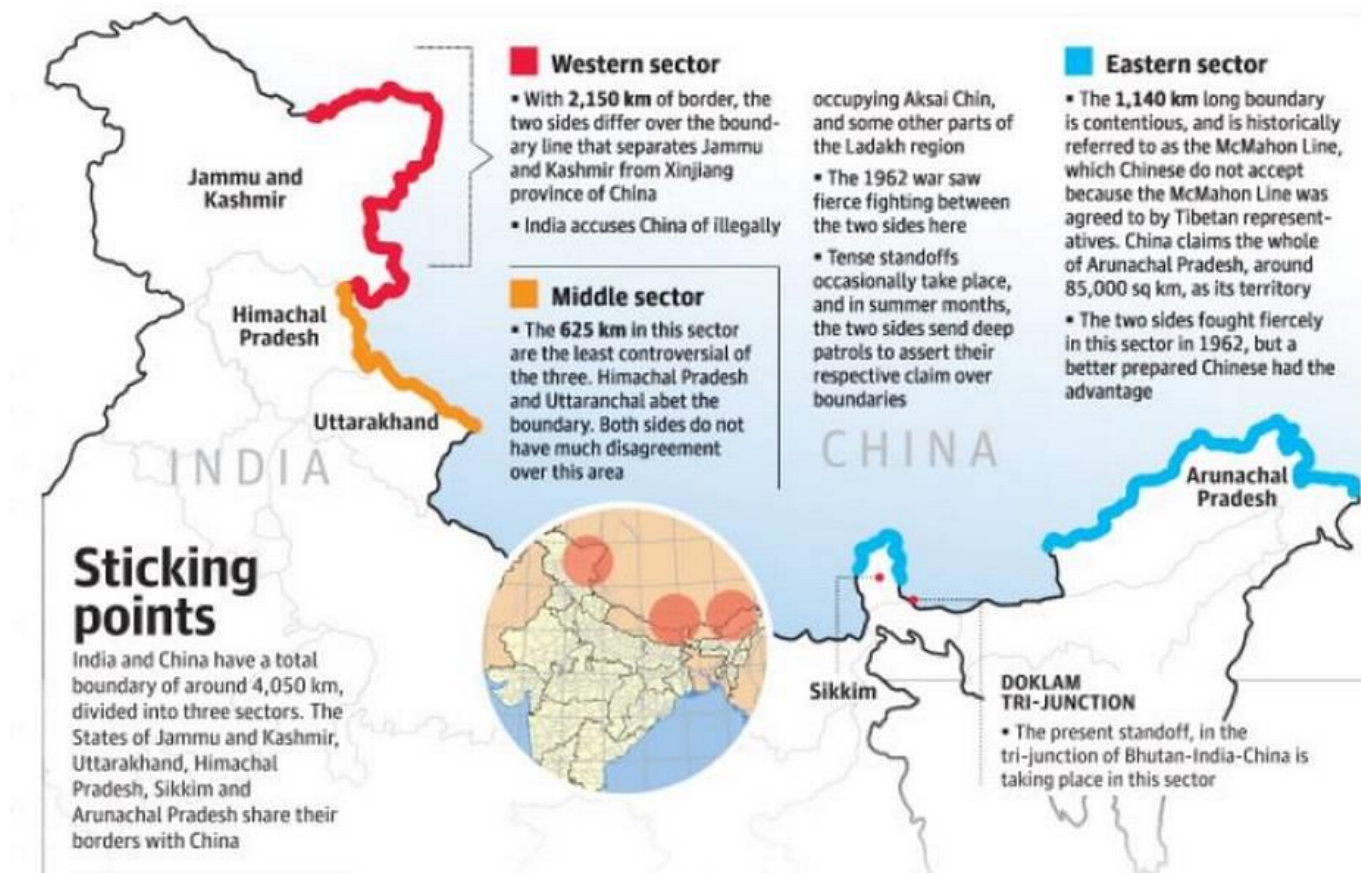- China alleged that Indian troops entered the Chinese side in Donglong

- India, on its part, objected to a road being built by China near the tri-junction

- This led to China barring entry for Kailash Mansarovar pilgrims from Nathu La border post last week

Boundary talks are ongoing between Bhutan and China. The release claims that Bhutan has written agreements of 1988 and 1998 stating that the two sides (Bhutan and China) agree to maintain peace and tranquility in their border areas pending a final settlement on the boundary question, and to maintain status quo on the boundary as before March 1959. The agreements also state that the two sides will refrain from taking unilateral action, or use of force, to change the status quo of the boundary.

India supporting Bhutan's stand asked China to halt all construction work. Chinese troops instead told India to remove two bunkers that were set up in 2012 at Lalten in the Dokolam region. On June 6 night the Indian bunkers were destroyed by Chinese Bulldozers. A standoff ensued with troop buildup by both the Peoples' Liberation Army and Indian Army. Conditions still remain the same with tension mounting. While the two armies are on eyeball to eyeball contact, China has resorted to sabre-rattling.

Rejecting Bhutan's claims, China has stated that the Dokolam area has always been a traditional pasture for Chinese cattle grazers over which it has always exercised complete control.

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The Dragon has preferred to play the Sikkim and Bhutan card to mount pressure on India. The Chinese official media has given a call for Sikkim's independence and separation from India. The state-controlled media has asked Chinese citizens to spark pro-independence movements in

Western sector
- With **2,150 km** of border, the two sides differ over the boundary line that separates Jammu and Kashmir from Xinjiang province of China
- India accuses China of illegally occupying Aksai Chin, and some other parts of the Ladakh region
- The 1962 war saw fierce fighting between the two sides here
- Tense standoffs occasionally take place, and in summer months, the two sides send deep patrols to assert their respective claim over boundaries

Middle sector
- The **625 km** in this sector are the least controversial of the three. Himachal Pradesh and Uttaranchal abet the boundary. Both sides do not have much disagreement over this area

Eastern sector
- The **1,140 km** long boundary is contentious, and is historically referred to as the McMahon Line, which Chinese do not accept because the McMahon Line was agreed to by Tibetan representatives. China claims the whole of Arunachal Pradesh, around 85,000 sq km, as its territory
- The two sides fought fiercely in this sector in 1962, but a better prepared Chinese had the advantage

DOKLAM TRI-JUNCTION
- The present standoff, in the tri-junction of Bhutan-India-China is taking place in this sector

Sticking points

India and China have a total boundary of around 4,050 km, divided into three sectors. The States of Jammu and Kashmir, Uttarakhand, Himachal Pradesh, Sikkim and Arunachal Pradesh share their borders with China

Sikkim thereby reversing India's "brutal" annexation of the state. Sikkim was an independent kingdom until it merged with India in 1975 following a decisive referendum. Interestingly China also recognizes Sikkim as an Indian state since 2003. The Chinese media has further suggested that China should build up a global consensus for the abolition of unfair treaties of sovereignty and defense that India has allegedly forced Bhutan to sign.

The state of Sikkim borders China in the north and east; Bhutan in the east; Nepal in the west and the state of West Bengal in the South. It shares a 220 km border with China; 32 km border with Bhutan. The region is also in close proximity to the Chicken neck.

Nathu La pass
- Nathu La is a mountain pass in the Himalayas.
- It connects the Indian state of Sikkim with China's Tibet Autonomous Region.
- The pass forms a part of an offshoot of the ancient Silk Road.

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- On the Indian side, the pass is 54 km east of Gangtok, the capital of Sikkim. Only citizens of India can visit the pass, and then only after obtaining a permit in Gangtok.
- Nathu La is one of the three open trading border posts between China and India; the others are Shipkila in Himachal Pradesh and Lipulekh (or Lipulech) at the trisection point of Uttarakhand–India, Nepal and China.
- Sealed by India after the 1962 Sino-Indian War, Nathu La was re-opened in 2006 following numerous bilateral trade agreements.
- The opening of the pass shortens the travel distance to important Hindu and Buddhist pilgrimage sites in the region and was expected to bolster the economy of the region by playing a key role in the growing Sino-Indian trade. However, trade is limited to specific types of goods and to specific days of the week.
- It is also one of the four officially agreed BPM (Border Personnel Meeting) points between the Indian Army and People's Liberation Army of China for regular consultations and interactions between the two armies, which helps in defusing stand-offs.

The four BPM are:
   1. Chushul in Ladakh,
   2. Nathu La in Sikkim,
   3. Bum La Pass in Tawang district of Arunachal Pradesh, and
   4. Lipulekh Pass in Uttarakhand.

China's hidden objectives

The area of scuffle is close to Indian chicken neck region i.e.Siliguri corridor and therefore is strategically very important and China knows India would never compromise with its security.As a Belt One Road (OBOR) project.OBOR summit was recently held in May and India had boycotted it. Without India's support success of OBOR can't be assured.

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5.16   India to be Co-Partner Country in ANUGA 2017

- India has signed the Memorandum of Understanding for Participation in the ANUGA Exhibition with Ms Katharina C Hamma, Chief Operating Officer, Koelnmesse GmBH (Organizers of ANUGA).

ANUGA

- ANUGA – an acronym for **Allgemeine Nahrungs Und Genußmittel Ausstellung (General Food and Non- essential Provisions Exhibition)** is the **world's biggest and most important trade fair for Food and beverage trade**.
- It takes place every 2 years.
- ANUGA 2017 is the 34th edition.
- ANUGA offers an extensive supporting programme with Lectures, Special exhibition and attractive industry events
- ANUGA is the leading export platform with 7,189 exhibitors from 109 countries with over 85% of Exhibitors from abroad.
- 1, 60, 000 decision makers from the retail and out-of-home market from 192 countries visited during last ANUGA. 66% of the industry visitors are foreigners.

5.17   India unanimously elected to head UN-Habitat

- India has been unanimously elected as the President of the UN-Habitat, an organ of the United Nations' Organisation (UNO) that promotes socially and environmentally sustainable human settlements across the world, after 10 years.
- India has been elected as the President of UN-Habitat after a gap of 10 years.
- This is only the third time that India has been elected as the President of UN-Habitat after 2007 and 1988. The UN-Habitat was established in 1978.
- India will be represented by the Union Minister of Housing & Urban Poverty Alleviation.
- Currently, the minister will chair the ongoing meeting of the 58 member Governing Council of UN-Habitat in Nairobi, Kenya.
- The theme of the meeting is "Opportunities for effective implementation of the New Urban Agenda"

New Urban Agenda

- The New Urban Agenda which was adopted by the world community at Quito, Ecuador would focus on inclusive, sustainable and adequate housing for a better future and sustainable urbanization and integrated human settlements.

UN-Habitat

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- UN-Habitat, also known as United Nations Human Settlements Program is a UN agency responsible for sustainable urban development and human settlements.
- It was established in 1978 and has its headquarters in the UN Office at Nairobi, Kenya.
- UN-Habitat reports to the United Nations General Assembly.
- It is also a member of UNDP.
- The twin goals of the Habitat Agenda are adequate shelter for all and the development of sustainable human settlements in an urbanizing world.
- The Governing Council of UN-Habitat is an inter-governmental policy making and decision making body that aims to promote integral and comprehensive approach to human settlements, assist the countries and regions in addressing human settlement problems and strengthen cooperation among countries over the issue of human settlement.

Mandate

- It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.
- The mandate of UN-Habitat derives from the Habitat Agenda, adopted by the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, in 1996.
- The mandate of UN-Habitat is further derived from other internationally agreed development goals, including those contained in the United Nations Millennium Declaration, in particular
  1. The target on achieving a significant improvement in the lives of at least 100 million slum-dwellers by the year 2020; and
  2. The target on water and sanitation of the Plan of Implementation of the World Summit on Sustainable Development, which seeks to halve, by the year 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.
- Member States committed themselves to continue working towards cities without slums, beyond current targets, by reducing slum populations and improving the lives of slum-dwellers.

Focus area

- UN-Habitat works in more than 70 countries in five continents focusing on seven areas:
  1. Urban Legislation, Land and Governance;
  2. Urban Planning and Design;
  3. Urban Economy;
  4. Urban Basic Services;
  5. Housing and Slum Upgrading;
  6. Risk Reduction and Rehabilitation;
  7. Urban Research and Capacity Development.

5.18 India top remittance-receiving country in 2016: UN report

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- As per a United Nations report titled 'Sending Money Home: Contributing to the SDGs, one family at a time', Indians working across the globe sent home USD 62.7 billion in the year 2016, making India the top remittance-receiving country.
- The study was conducted by the **UN International Fund for Agricultural Development (IFAD).**
- The study is the first-ever of a 10-year trend in migration and remittance flows over the period 2007-2016.

Highlights of the report

Global scenario

- About 200 million migrants globally sent more than $445 million in 2016 as remittances to their families, helping to lift millions out of poverty.
- Remittance flows have grown over the last decade at a rate averaging 4.2 per cent annually, from $296 billion in 2007 to $445 billion in 2016.
- 80% of remittances are received by 23 countries, led by India, China, the Philippines, Mexico and Pakistan.
- **The top 10 sending countries** account for almost half of annual flows, **led by the US, Saudi Arabia and Russia.**
- Asia is the highest originating region with 77 million migrants; with 48 million remaining within the region.
- Over the past decade, remittances to Asia and the Pacific increased by 87 per cent, reaching $244 billion, while migration grew by only 33% in comparison.
- Asia remains the main remittance-receiving region, with 55% of the global flows and 41% of total migrants.
- It is projected that an estimated $6.5 trillion in remittances will be sent to low and middle-income countries between 2015 and 2030.

Indian scenario

- **India** was the top receiving country for remittances in 2016 at $62.7 billion, **followed by China ($61 billion), the Philippines ($30 billion) and Pakistan ($20 billion).**
- In 2007, India was on the second spot, behind China, with $37.2 billion in remittances as compared to $38.4 billion for China.
- In the decade between 2007 and 2016, India surpassed China to become the top receiving country for remittances.

Importance of remittances

- Migration flows and remittances are having large-scale impacts on the global economy and political landscape.
- Total migrant earnings are estimated at $3 trillion annually, approximately 85 per cent of which remains in the host countries.

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- The money sent home averages less than one per cent of their host's GDP. Taken together, these individual remittances account for more than three times the combined official development assistance (ODA) from all sources, and more than the total foreign direct investment to almost every low—and middle-income country.
- Currently, about 200 million migrant workers support some 800 million family members globally. In 2017, an expected one-in-seven people globally will be involved in either sending or receiving more than $450 billion in remittances.

IFAD

- The International Fund for Agricultural Development (IFAD) is an **international financial institution and a specialised agency of the United Nations.**
- It was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference.
- IFAD is dedicated to eradicating poverty and hunger in rural areas of developing countries.
- It was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference.
- Its headquarters is in Rome, Italy, and is a member of the United Nations Development Group.
- Membership in IFAD is open to all member states of the United Nations or its specialised agencies or the International Atomic Energy Agency.
- The Governing Council is IFAD's highest decision-making authority.
- IFAD's goal is to empower poor rural men and women in developing countries to achieve higher incomes and improved food security.

Objectives of IFAD:

- IFAD seeks to ensure that poor rural people have better access to, and the skills and organisation they need to take advantage of:
- Natural resources, especially secure access to land and water, and improved natural resource management and conservation practices
- Improved agricultural technologies and effective production services
- A broad range of financial services
- Transparent and competitive markets for agricultural inputs and produce
- Opportunities for rural off-farm employment and enterprise development
- Local and national policy and programming.

5.19 India re-elected to UN body on economic, social issues; Pakistan loses out

- India has won its re-election to ECOSOC, UN's principal organ on economic, social and environmental issues for another three-year term.

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- India was one among the 18 nations to win election to the **Economic and Social Council (ECOSOC).**
- India has obtained 183 votes which is the second highest after Japan in the Asia-Pacific category.
- Pakistan whose term is also expiring also sought for re-election but lost and got only one vote.

Election

- A country requires two-thirds of the total votes to become a member of ECOSOC.
- The ECOSOC has a total of 54 members. The Council's 54 members are elected by the General Assembly for overlapping three-year terms.
- Out of the 54, 14 seats are allocated to African states, 11 to Asian states, 6 to Eastern European states, 10 to Latin American and Caribbean states, and 13 to Western European and other states.

ECOSOC

- The Economic and Social Council (ECOSOC) was established in 1945 as one of the six main UN organs which were established by the UN Charter.
- It is the United Nations' central platform for reflection, debate, and innovative thinking on sustainable development.
- It is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental.
- ECOSOC is the 'principal body for coordination, policy review, policy dialogue and recommendations on economic, social and environmental issues, as well as for implementation of the internationally agreed development goals.'
- It supervises the subsidiary and expert bodies in the economic, social and environmental fields.

5.20   India-UK agree on MoU in urban transport sector

- India and the UK agreed to sign an MoU in the urban transport sector for cooperation in policy planning, technology transfer and institutional organisation.
- The MoU is the bilateral cooperation arrangement between the Transport for London (TfL) and the India's Ministry of Road Transport and Highways.
- The signing of the MoU will be completed through diplomatic channels shortly.
- The agreement will involve sharing expertise on the mobility and efficiency of India's transportation systems, as well as around logistical issues such as planning and delivery.
- It will also cover TfL's experience in ticketing, providing information, financing and infrastructure maintenance work, as well as promotion of the use of public transport.
- Other areas of cooperation in the future were likely to include innovation around buses, including electric buses, and the use of water transport in urban centres.
- London's transport system is considered one of the best equipped in the world, deploying a wide range of options from the Underground train network to an extensive bus network, the Dockland Light Railway, trams, ferries and even a cable car.

- During the visit, Mr. Gadkari was given a presentation on strategy and policy reforms around the bus system, as well as other forms of transport.

5.21   Urea manufacturing Plant in Malaysia

- The Union Cabinet has given its ex-post facto approval to the signing of Memorandum of Understanding with Malaysia on development of a Urea and Ammonia manufacturing plant in Malaysia with off take to India and/or off take of existing surplus Urea from Malaysia to India.

- The project is expected to cost US$ 2.1 billion with capacity to produce 2.4 million tonnes of Urea and 1.35 million tonnes of Ammonia per annum and dedicated supplying to Indian market.

- The signing of MoU will ensure consistent supply of Urea and Ammonia to cater the need of the country at a lower price, if agreed to by both the participants.
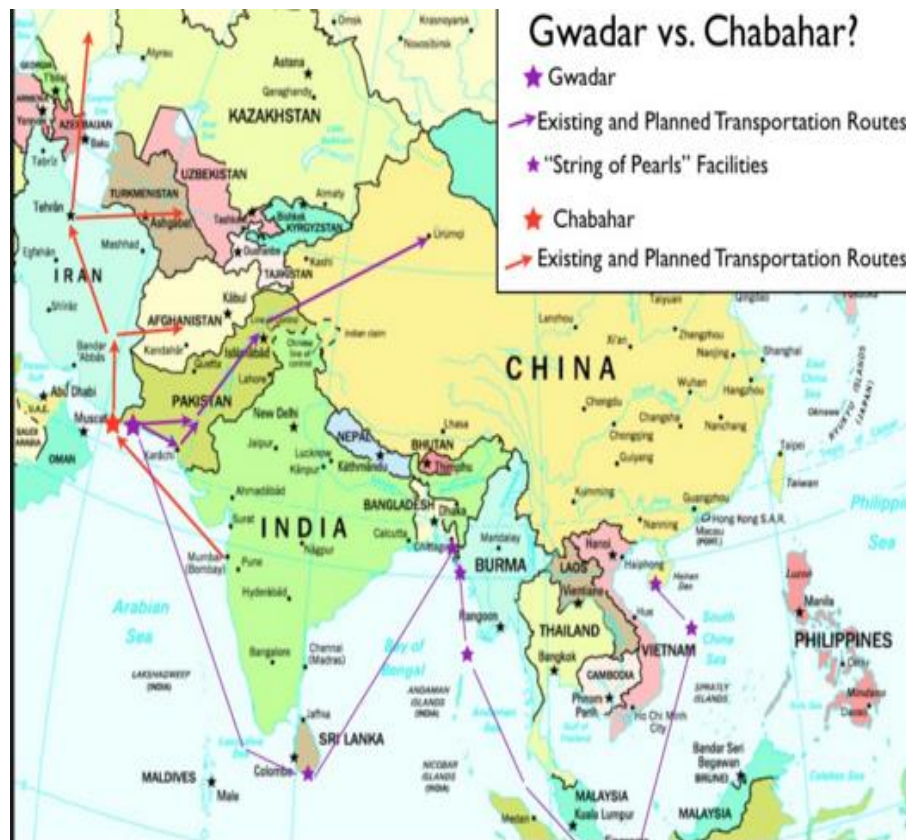
6. <u>INTERNATIONAL</u>

6.1   Japan pitches for Chabahar port

- Japan has shown interest in collaborating with India on projects in Asia and Africa as a counter to China's Belt and Road initiative (B&RI).
- Categorically, it has shown interest in Chabahar port development.

Chabahar port

- The port of Chabahar is located on the Makran coast of Sistan and Baluchistan Province, next to the Gulf of Oman and at the mouth of Strait of Hormuz.
- It is the only Iranian port with direct access to the Indian Ocean.
- Being close to Afghanistan and the Central Asian countries of Turkmenistan, Uzbekistan etc., it has been termed the **"Golden Gate"** to these land-locked countries.
- The Chabahar port was **partially developed by India in the 1990s**.

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How important the port is for India?

- India believes the Chabahar port is critical to its interests and wants to develop it as a counter to Pakistan's Gwadar port which was built with Chinese assistance.
- The port will allow India to bypass Pakistan to transport goods to Afghanistan and Central Asia using a sea-land route.
- Chabahar Port lies outside the Persian Gulf in Iran and will help India in expanding its maritime commerce in the region.
- It also provides opportunities to Indian companies to penetrate and enhance their footprint in the region.
- At present, majority of Iran's seaborne trade is handled by the Bandar Abbas port. Chahbahar has much higher trading and shipping capacity than Bandar Abbas. The decision of the Indian government to invest in the Chahbahar port marks high trade prospects for both the countries.
- Since the partition of the country in 1947, India's trade access to Afghanistan has been thwarted by Pakistan. While no Indian goods can move to Afghanistan through Pakistan, only a trickle of

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goods from Afghanistan can reach India. Trade interests in Afghanistan and in Central Asia, made it imperative for India to look for an alternative route, which was provided by Chabahar.

- Strategic importance of Chabahar Port is its location. Chabahar Port is roughly 70 kilometres west of Pakistan's Gwadar port.
- The Chabahar Port provides a connectivity by road from Iranian port city of Chabahar to a point at Iran's Northern border with Afghanistan, from where Delaram–Zaranj Highway starts.

6.2   'Plankton explosion' turns Istanbul's Bosphorus turquoise

- A sudden change in the colour of the Bosphorus Strait that divides the continents of Europe and Asia in Turkey's largest city Istanbul since the weekend has alarmed some residents.

Reason behind colour change

- The cause was a surge in numbers of the micro-organism Emiliania huxleyi.
- One of the most successful life-forms on the planet, Emiliania huxleyi is a single-celled organism visible only under a microscope.
- Its astonishing adaptability enables it to thrive in waters from the equator to the sub-Arctic.

Location of Bosphorus Strait

- It is a natural strait **connecting the Black Sea to the Sea of Marmara**, thus being a very strategic waterway.
- Its length is 32 kilometers (20 miles) in the north to south direction.

Bosphorus strait separates the European part from the Asian part of Istanbul.

6.3   US to Declare China as Among World's Worst Human Trafficking Offenders

- The United States plans to place China on its global list of worst offenders in human trafficking and forced labor.
- US has decided to drop China to "Tier 3," the lowest grade, putting it alongside Iran, North Korea and Syria among others.
- In last year's annual report, the US placed China on its "watch list" of countries that aren't meeting minimum standards and could be downgraded to the lowest classification.

What does it mean to be listed under "Tier 3"?

- "Tier 3," is the ranking system's lowest category which applies to countries failing to meet minimum standards to prevent human trafficking or making significant improvement efforts.

Why China?

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- According to the US, Beijing was not doing enough to curb "state sponsored forced labor," and did not meet "minimum standards" for fighting human trafficking, even though it was making progress.
- Concerns have also been raised about forced begging in China that particularly affects children. Girls and women from rural areas are at higher risk of being recruited for sex trafficking in cities.

What if any country is placed under "Tier 3"?

- Countries placed on Tier 3 are liable to be penalised with sanctions, including the withholding of non-humanitarian aid and assistance that could affect agreements with the International Monetary Fund and World Bank.
- Officials of the Tier-3 countries are also liable to be barred from participating in US government educational and cultural exchange programs.
- However, the US president retains the authority to waive the sanctions taking into account national interest or if he feels that the penalties could adversely affect vulnerable populations. The previous administrations of the US have often granted waivers for the tier-3 countries.

6.4   Kaushik Basu leads International Economic Association

- The Finance Ministry's former Chief Economic Advisor Kaushik Basu has taken over as President of the International Economic Association (IEA).
- He will hold the office for a term of three years.

IEA

- Founded in 1950, the International Economic Association (IEA) is **a Non-Governmental Organization**, at the instigation of the Social Sciences Department of UNESCO.
- The IEA is one of the key organisations of professional economists and has been significant in determining global economic policy and research.
- Since its creation, it is maintained information and consultative relations with UNESCO and is since 1973 a federated member of the International Social Science Council.
- Its aim from the beginning has been to promote personal contacts and mutual understanding among economists in different parts of the world through the organization of scientific meetings, through common research programs and by means of publications of an international character on problems of current importance.
- The IEA is governed by a Council, composed of representatives of all Member Associations as well as a limited number of co-opted members. The Council meets triennially when it reviews the general policy of the Association and elects the President and other Officers and members of the Executive Committee for a three-year term of office.
- IEA produces a large number of research papers and books and organises roundtables on topics of present-day interest.
- Its principal activities include International Congress organised every 3 years. The occasion serves as one of the major assemblies of economists from around the world.

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- Amongst the past presidents of IEA were the Nobel Laureates Robert Solow, Amartya Sen and Joseph Stiglitz.3

6.5   Russia, Iran and Turkey sign a deal on Syrian crisis

- Allies of Syria- Russia and Iran and rebel supporter Turkey signed a memorandum, backing Moscow's plan of creating safe zones in Syria to encourage a truce between the Syrian government and the rebel forces.
- The Syrian government and rebel delegations were not among the signatories.
- The representative delegations reviewed the implementation of the ceasefire agreement and the termination of hostilities during the two-day talk in Astana.
- After much deliberation, the guarantor countries agreed to sign a memorandum on the creation of de-escalation zones in Syria.
- The main aim of the deal is to put an immediate end to the violence, to provide safe conditions for the voluntary return of refugees and to enable immediate delivery of relief supplies and medical aid.
- The proposal calls for the creation of safe zones in rebel-held territories including the north-western province of Idlib, parts of Homs province in the centre, in the south and in the opposition enclave of Eastern Ghouta near Damascus.
- However, in spite of all these measures, some issues remain unclear like which guarantor country would be policing which safe zone.

6.6   Panama dumps Taiwan, supports One-China policy

- Panama cut ties with Taiwan, switching its diplomatic relations to the People's Republic of China and accepting the "One China" policy.
- Panama now "recognizes that there is only one China in the world" and that Taiwan is part of Chinese territory.
- With Panama switching sides, Taiwan's decades-old attempt to act as a "sovereign country" would likely face fresh challenges.
- Over the years Beijing has tried to choke Taiwan diplomatically in a bid to force the self-ruled island to accept itself as a part of China.

What is One-China Policy?

- It is the diplomatic acknowledgement of China's position that there is only one Chinese government.
- Under the policy, any country that wants diplomatic relations with mainland China must break official ties with Taipei that it considers a 'breakaway province.'

How China has been trying to choke Taiwan in recent years?

- Beijing doesn't trust present Taiwan President Tsai Ing-wen and her ruling party, which advocates independence for Taiwan.

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- After Tsai came to power last year, China had cut official communication channels with her government in a bid to pressure her to accept that Taiwan is part of China.
- A year ago, Taiwan had diplomatic ties with 23 countries. But in the last one year itself, as many as three countries have severed diplomatic ties with the country, which is claimed by China as its own — a part of the mainland.
- In 2007, Costa Rica was the first of Taiwan's Central American partners to switch allegiance to China. It was southern African nation of Malawi in 2008. Gambia in West Africa followed suit in 2013.
- Last year, small African states Sao Tome and Principe switched ties from Taiwan to China. Taiwan is now left with only two allies in Africa: Burkina Faso in the west and the Kingdom of Swaziland in the south. Now, Taiwan's only diplomatic partner in Europe is Holy See.

6.7   China tests 'Lunar Palace' as it eyes moon mission

- China has set up a 160-square-meter (1,720-square-foot) laboratory — dubbed as "Yuegong-1", or "Lunar Palace" for simulating a lunar-like environment.
- As part of this experiment, four Chinese students will live in the laboratory for up to 200 days in a bid to prepare for China's long term goal of putting humans on the moon.
- The student volunteers would be sealed inside the cabin with no input from the outside world in order to simulate long-term, self-contained space mission.
- The cabin will have facilities for treatment of human wastes through bio-fermentation process.
- The experimental crops would also be grown in the laboratory with the help of food and waste byproducts.

Lunar Palace
- The Lunar Palace is hailed as the world's third bioregenerative life-support base and the first to be developed in China.
- The Lunar Palace is the first of its kind facility to involve animals and microorganisms as well as plants and humans.

Bioregenerative Life Support System
- It is an artificial ecosystem where animals, plants and microorganisms co-exist.
- It is the most advanced life support technology and can provide a habitation environment similar to the Earth's biosphere for space missions with extended durations.
- The system enables the production of food internally and regeneration of oxygen through the vegetation compartment.
- It also enables recycling of water and the crew's waste is in turn used as a fertilizer for the growth of vegetation.

6.8   10 May: World Migratory Bird Day

- The World Migratory Bird Day (WMBD) 2017 was observed across the world on 10 May 2017.
- The theme for WMBD 2017 is "Their Future is our Future – A Healthy Planet for Migratory Birds and People."
- The theme for the year throws light on the topic of Sustainable Development for Wildlife and People.
- The World Migratory Bird Day is observed with an aim to raise awareness and highlight the need for the protection of migratory birds and their habitats.
- The World Migratory Bird Day is an annual global celebration initiated in 2006 by the United Nations.
- The event was founded as an effort of the UN's Agreement on the Conservation of African-Eurasian Migratory Waterbirds (African-Eurasian Waterbird Agreement).

UN's Agreement on the Conservation of African-Eurasian Migratory Waterbirds

- The Agreement is an independent international treaty developed under the auspices of the United Nations Environment Programme's Convention on Migratory Species.
- It was founded to coordinate efforts to conserve bird species migrating between European and African nations.
- Its current scope stretches from the Arctic to South Africa, encompassing the Canadian archipelago and the Middle East as well as Europe and Africa.
- The agreement focuses on bird species that depend on wetlands for at least part of their lifecycle and cross international borders in their migration patterns. It currently covers 254 species.

6.9   1 May: International Labour Day

- International Labour Day 2017 was celebrated across the world on 1 May 2017.
- The day is also known as International Worker's Day and May Day.
- The day is celebrated by the working classes and is promoted by the international labour movement, socialists and communists.
- The International Labour Day is celebrated to commemorate the happenings of 4 May 1886, the Haymarket affair (Haymarket Massacre) in the Chicago.
- It was a big event as workers were on the general strike for their eight-hour workday and police were doing their job of dispersing the general public from the crowd. Suddenly, a bomb was thrown over the crowd and then police started firing over the workers and four demonstrators were killed.
- It was due to the sacrifice of these workers that eight-hours was declared as the legal time for the workers in the National Convention at Chicago in 1884 by the American Federation of Labor.

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- To commemorate this event, the Second International, a pan-national organization of socialist and communist political parties, marked 1 May as the International Labour Day in 1891.

6.10   Driving towards safer roads

- In the WHO South East Asia Region, it is estimated that approximately 3,16,000 people die every year on roads, which is around 865 fatalities each day.
- Twenty to 50 times that number are injured or disabled and require long-term care.
- Road fatalities are the leading cause of death among young persons, while road safety incidents cost upwards of 3% of GDP. That's before accounting for medical expenses.

Factors responsible

- Though the behaviour of road users matters, poor public policy is at the root of the problem.
- The vast majority of 'accidents' could have been avoided by better use of road safety technology such as barriers, rumble strips or signage. Their impact could also have been lessened by safer vehicles.
- Good policy can also bring about immediate change.

What needs to be done?

- Action in four key areas can diminish injury and death on roads across the South East Asia Region, and help achieve the Sustainable Development Goal (SDG) of halving the number of global deaths and injuries from road traffic accidents by 2020. These include:

First,

- Road safety authorities must have the data needed to act efficiently.
- Good data allow authorities to analyse and understand the factors causing road crashes, as well as to devise and implement cost-effective solutions.
- This could be as minor as installing a guardrail on a switchback, or as substantial as demolishing a high-risk road and building it anew.
- Clear lines of responsibility and partnership among government agencies and stakeholders can help this process, especially given the problem's multi-sectoral nature.

Second,

- Infrastructure must be tailored to the needs of vulnerable road users.
- On average 50% of road deaths occur among pedestrians, cyclists and motorcyclists.
- In some countries, this figure rises to more than 80%. Bicycle lanes, pedestrian crossings and enforcement of helmet laws among other interventions can dramatically reduce these numbers.
- They can do so in a way that makes our cities less car dependent.

Third,

- Motor vehicles must be manufactured to higher safety standards.
- Just two of the region's countries currently apply any of the seven priority international vehicle safety standards, such as seat belts and electronic stability control.

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- These are India which implements two of the seven priorities, and Thailand which implements one of the seven. Not a single country applies all.

Fourth,

- The response to post-crash emergencies must be increased.
- When every second counts, a nationwide emergency phone service is critical. So too are efficient pre-hospital response and hospital trauma care systems.
- In addition, steps should be taken to enhance early rehabilitation and support for road crash victims. This will help avoid long-term complications and enhance quality of life. It will also reduce health-care usage over the life-course.

Expectations from citizens

- Each one of us can limit the prospect of an incident and protect ourselves and our loved ones by slowing down, by desisting from drink-driving, by using seat belts and child restraints, and, when riding a motorcycle, by wearing a helmet.
- These actions will reinforce government-led initiatives, and will also promote society-wide change.

6.11   World Press Freedom Index 2017

- World Press Freedom Index for the year 2017 has been released.
- World Press Freedom Index is published annually by Reporters Without Borders (RSF) since 2002.
- It measures the level of freedom available to journalists in 180 countries using the following criteria – pluralism, media independence, media environment and self-censorship, legislative environment, transparency, infrastructure, and abuses.

Performance of various countries:

- Norway is at the apex and North Korea at the bottom of the 180-strong list of nations.
- After six years at the top, Finland has surrendered its No. 1 position due to political pressure and conflicts of interests.
- Sweden has risen six places to take 2nd position.
- **India is ranked 136**, three points down from last year. India's previous rank was 133. **The report blames the rise of Hindu nationalism for the drop in ranking.**
- The Index's bottom five also include Turkmenistan (178th), one of the world's most repressive and self-isolated dictatorships, which keeps increasing its persecution of journalists, and Syria (177th), riven by a never-ending war and still the deadliest country for journalists, who are targeted by both its ruthless dictator and Jihadi rebels.
- The Middle East and North Africa region, which has ongoing wars in Yemen (down 4 at 166th) as well as Syria, continues to be the world's most difficult and dangerous region for journalists.
- Eastern Europe and Central Asia, the second worst region, does not lag far behind. Nearly two third of its countries are ranked below or around the 150th mark in the Index.

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- The Asia-Pacific region is the third worst violator overall but holds many of the worst kinds of records. Two of its countries, China (176th) and Vietnam (175th), are the world's biggest prisons for journalists and bloggers.
- It has some of the most dangerous countries for journalists: Pakistan (139th), Philippines (127th) and Bangladesh (146th).

Important observations made by the report:

- RSF's latest World Press Freedom Index highlights the danger of a tipping point in the state of media freedom, especially in leading democratic countries.
- The obsession with surveillance and violations of the right to the confidentiality of sources have contributed to the continuing decline of many countries previously regarded as virtuous.
- Media freedom has never been so threatened and RSF's "global indicator" has never been so high (3872). This measure of the overall level of media freedom constraints and violations worldwide has risen 14% in the span of five years.

6.12   World Press Freedom Day

- The United Nations General Assembly declared May 3 to be World Press Freedom Day or just World Press Day to raise awareness of the importance of freedom of the press.
- Theme 2017: "Critical Minds for Critical Times: Media's role in advancing peaceful, just and inclusive societies".
- This was also to remind governments of their duty to respect and uphold the right to freedom of expression enshrined under Article 19 of the 1948 Universal Declaration of Human Rights.
- It also marks the anniversary of the Declaration of Windhoek a statement of free press principles put together by African newspaper journalists in 1991.
- World Press Freedom Day was first organized by the United Nations General Assembly in 1993 in an effort to reflect upon press freedom in the world.
- This day acts as a reminder of the importance of a free press in a functioning and safe society and serves to commemorate the journalists who have lost their lives in support of free press.
- UNESCO marks World Press Freedom Day by conferring the UNESCO/Guillermo Cano World Press Freedom Prize on a deserving individual, organisation or institution that has made an outstanding contribution to the defence and/or promotion of press freedom anywhere in the world, especially when this has been achieved in the face of danger.

6.13   Global Innovation Index 2017

- The World Intellectual Property Organisation (WIPO) in its 10th edition of the 'Global Innovation Index (GII)' ranked India 60th on its list of 130 most innovative countries in the world.

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- Switzerland, Sweden, the Netherlands, the US and UK retained their top spots as the most-innovative countries.
- Among India's neighbours, Sri Lanka took the 90th spot whereas Nepal was at 109th. Pakistan came in at 113 followed by Bangladesh at 114.

Global Innovation Index (GII)

- The Global Innovation Index (GII) is an annual ranking of countries by their capacity for, and success in, innovation.
- It is published by **Cornell University**, **INSEAD**, and the **World Intellectual Property Organization**, in partnership with other organizations and institutions.
- GII ranks countries on an annual basis on 82 parameters for their contribution towards successful innovations based on their capacity.
- The index is based on both subjective and objective data derived from several sources, including the International Telecommunication Union, the World Bank and the World Economic Forum.
- The index was started in 2007 by INSEAD and World Business, a British magazine.
- The GII is commonly used by corporate and government officials to compare countries by their level of innovation.

India's performance

- India performed well across a number of parameters, coming to the top spot in ICT services exports.
- It is ranked 10th in category of graduates in science and engineering, 27th on e-participation, 14th on the presence of global research and development companies, 33rd on government's online service, 32nd in general infrastructure, 18th on creative goods exports, 30th on knowledge impact and 29th on intellectual property payments.
- India is 2nd in innovation quality for the second consecutive year.
- India outperformed on innovation relative to its GDP per capita for seven years in a row.
- India has shown improvement in most areas, including in infrastructure, business sophistication, knowledge and technology and creative outputs.
- The report also noted India's continual improvement in terms of investment, tertiary education, quality of its publications and universities, its information and communication technology (ICT) services exports and innovation clusters.
- India is now in the top half of the GII rankings.

Suggestion for India

- The report suggested that if India then increasingly connects its innovation system to the innovative countries in the East as well as to standing innovation powerhouses in the West, it will make a true difference in Asia's regional role in innovation, and to global innovation more generally.

Govt. of India's efforts

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- The improvement in India's rank came after five years of a continuous drop in rankings.

To assess India's position on the innovation front, the Ministry of Commerce and Industries had set up a task force on innovation. The task force comprising of government officials and experts from private organizations & academia, has recently come up with its report that detailed specific measures to improve India's ranking in GII.

6.14   UN approves creation of new office on counter-terrorism

- The United Nations General Assembly has approved the establishment of a new United Nations office of counter-terrorism to help Member States implement UN's global counter-terrorism strategy.

Implications of the move

- With the creation of new UN office of counter terrorism, UN will transfer the relevant functions out of the UN Department of Political Affairs (DPA) into the new body.
- The Counter-Terrorism Implementation Task Force Office (CTITF) and the UN Counter-Terrorism Centre (UNCCT) currently under the DPA will be transferred to the new office together with existing staff and associated budgetary resources.
- The new UN Office of counter-terrorism would he headed up by an Under-Secretary-General.
- The new Under-Secretary-General would Chair the Task Force and Executive Director of the UN Counter-Terrorism Centre.

Functions of the new office

The new office will have the following five main functions:

1. To provide leadership on the counter-terrorism mandates entrusted to it across the United Nations system.
2. To enhance coordination and coherence across the 38 Counter-Terrorism Implementation Task Force entities for ensuring balanced implementation of the four pillars of the UN Global Counter-Terrorism Strategy.
3. To strengthen the delivery of United Nations counter-terrorism capacity-building assistance to the Member States.
4. To improve visibility, advocacy and resource mobilization for United Nations counter-terrorism efforts; and
5. To ensure that priority is given to counterterrorism across the United Nations system.
6. India has been repeatedly stressing on the need to have a separate office for counter-terrorism as the presence of as many as 31 entities within the United Nations dealing with some aspect of countering terrorism lacked coherence and coordination in dealing with terrorism.

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6.15   Officials from Arctic nations to meet amid drilling concerns

- High-level officials from the world's eight Arctic nations are meeting in Alaska amid concerns about the future of the sensitive region after United States President Donald Trump called for more oil drilling and development.
- No formal discussions were set in Alaska on key issues such as climate change, development and drilling.
- But those issues will provide a backdrop as the chairmanship of the council passes from the US to Finland.

Arctic Council

- The Arctic Council is an advisory body that promotes cooperation among member nations and indigenous groups.
- Its focus is on sustainable development and environmental protection of the Arctic.
- It does not make policy or allocate resources, and its decisions must be unanimous.
- In terms of being a reflection of a nation's priorities, it can only go so far since all eight have to agree to the same thing.
- Eight member countries constitute the council: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States as these are the eight countries with sovereignty over the lands within the Arctic Circle.
- Observer status is open to non-Arctic states approved by the Council at the Ministerial Meetings that occur once every two years. Observers have no voting rights in the Council.
- Presently, there are 12 observer states including India and China.

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7. Political Issues, Human Rights and Governance

7.1 Parliamentary panel reaches consensus on NCBC bill

- A parliamentary panel examining a bill, which seeks to accord constitutional status to the National Commission for Backward Classes, has reached a consensus.
- The consensus has paved the way for its likely passage in Rajya Sabha in the monsoon session.
- With the passage of the bill, the NCBC, a statutory body under the Ministry of Social Justice and Empowerment, will get a constitutional status.

NCBC

- Set up in 1993, the NCBC was entrusted with examining requests for inclusion of any class of citizens as a backward class in the lists and hear complaints of over-inclusion or under-inclusion of any backward class in such lists and advice central government on the matter.
- The bill was referred to the Rajya Sabha's select committee after the opposition prevailed on the government to do so. It was passed by the Lok Sabha in April this year, but the opposition blocked its consideration in the upper house.
- There have been demands in the Parliament and by the general public for grant of constitutional status to the National Commission for Backward Classes to enable it to hear the grievances of OBCs in the same manner that a National Commission for Scheduled Castes (constituted under Article 338) and National Commission for Scheduled Tribes (constituted under Article 338A) hear the grievances of Scheduled Castes and Scheduled Tribes.

7.2 CIC says BCCI should come under the RTI Act

- In its latest order, the Central Information Commission (CIC) has urged the Committee of Administrators (CoA) running the Board of Control for Cricket in India (BCCI) to bring the organisation under the RTI Act.
- Previously, the CIC had elaborately explained the need for making BCCI a public authority.

Why BCCI come under the purview of RTI?

- BCCI is a National Sports Federation for cricket, which received thousands of crores towards tax concessions.
- The government had declared all the National Sports Federations (NSF)s receiving a grant of Rs. 10 lakh or more as a Public Authority under Section 2(h) of the RTI, 2005. Thus, it has to come under the RTI in order to remain accountable to the public.

Central Information Commission

- Established in 2005, the Central Information Commission (CIC) is the authorised body under the Government of India.
- It was set up under the Right to Information Act.
- It was set up to act upon complaints from those individuals who have not been able to submit information requests to a Central Public Information Officer or State Public Information Officer

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due to either the officer not having been appointed, or because the respective Central Assistant Public Information Officer or State Assistant Public Information Officer refused to receive the application for information under the RTI Act.

- The Commission includes 1 Chief Information Commissioner (CIC) and not more than 10 Information Commissioners (IC) who are appointed by the President of India.

Appointments

- The Chief Information Commissioner and Information Commissioners are appointed by the President on the recommendation of a committee consisting of
  1. The Prime Minister, who shall be the Chairperson of the committee.
  2. The Leader of Opposition in the Lok Sabha.
  3. A Union Cabinet Minister to be nominated by the Prime Minister.

7.3   Tele-Law through CSCs To Mainstream Legal Aid in Rural India

- The Ministry of Law and Justice has launched the 'Tele-Law' initiative in collaboration with the Ministry of Electronics and Information Technology to provide legal aid services to the marginalized communities and citizens living in rural areas through the Common Service Centres (CSC) at the panchayat level, spread across the country.

Tele Law initiative

- 'Tele Law initiative would help people to seek legal advice from lawyers with the help of video conferencing facility available at the Common Service Centres (CSC).

- Apart from the lawyers, law school clinics, District Legal Service Authorities, voluntary service providers and Non-Government Organisations working on legal aid and empowerment can also be connected through the CSCs.

- In the initial phase, the initiative will be tested as a pilot project across 500 Common Service Centres (CSC) in Uttar Pradesh and Bihar. In this phase, challenges to the initiative would be identified and necessary corrections would be made and would eventually be rolled out across the country in a phased manner.

- A new portal called 'Tele Law' will be made available across the CSC network to connect the citizens to legal service providers with the help of technology-enabled platforms.

- The initiative would strengthen access to justice for the marginalized communities.

- The government will also put in place a robust monitoring and evaluation system to assess the quality of the legal advice delivered to the people.

PLV

- Under the initiative, a Para Legal Volunteer (PLV), would be employed in each CSC.

- The volunteer would serve as the first point of contact for the marginalized communities in the rural areas who will help them understand the legal issues, explain the advice given by lawyers and assist in further action as per the advice of the lawyer.

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- Around 1000 women Para Legal Volunteers will also be trained under this initiative to provide legal aid services through the CSCs.
- This is expected to promote women entrepreneurship and empowerment.

Further, the National Legal Service Authority (NALSA) will also provide a panel of lawyers who will provide advice from the state capitals to the applicants in the CSCs through video conferencing.

7.4   Public Affairs Index - PAI

- The PAI aims to rank the states of India objectively in the field of governance based on various focus subjects and indicators and is an initiative of the Public Affairs Committee (PAC). The PAC is a not-for-profit think-tank focussed on good governance, which was established in 1994.

Themes of the survey

- The survey was based on 10 themes, 26 focus subjects and 82 indicators. The report was based on a wide range of themes such as essential infrastructure, support to human development, social protection, women and children, crime, law and order, delivery of justice, environment, transparency and accountability, fiscal management and economic freedom.

Highlights of the study

- Kerala and Tamil Nadu have secured first and second rankings for the second consecutive year in the best governance in the country.
- Gujarat has been ranked third followed by Karnataka and Maharashtra at the fourth and fifth position respectively in governance indicators.
- The last four positions among the large states has been occupied by Bihar, Jharkhand, Odisha and Assam.
- Among the 12 small states which have been categorised as small as they have population less than two crore, Himachal Pradesh has been ranked first followed by Goa and Mizoram.
- Delhi which occupied third position in 2016 index has slipped to ninth position in 2017.
- The last four positions among small states have been occupied Meghalaya (12th), Arunachal Pradesh (11th) and Jammu and Kashmir (10th).
- In the category of essential infrastructure, Punjab has been adjudged as the best performer among all States followed by Tamil Nadu, Andhra Pradesh and Gujarat.
- In the category of human development, Kerala, Maharshtra, and Punjab are the best performers while Uttar Pradesh, Madhya Pradesh and Assam are the worst performers.
- In implementation of social protection policies, Kerala, Assam and Madhya Pradesh are the best performers while Telangana, Haryana and Punjab are the worst performers as they lagged behind other states in executing various State and Central government schemes.
- In the category of women and children, Kerala has been adjudged as the best performer while Jharkhand, Haryana and Maharashtra are poor performers.
- In the category of fiscal management, Telangana has been adjudged as the best performer while Andhra Pradesh has been labelled as the poor performer.

- In maintaining law and order, delivery of justice and environment categories, Tamil Nadu has been adjudged as the best performer but the state has been ranked last in the parameter of transparency and accountability in the administration.
- In the category of economic freedom, Gujarat has secured top rank while Bihar has secured the last rank.

7.5   Doctrine of "SAMADHAN' for use in security operations

- The Home Minister has enunciated an operational strategy 'SAMADHAN' to fight Left Wing Extremism.

The new doctrine, 'SAMADHAN' will have 8 pillars and they are:

- S for Smart Leadership.
- A for Aggressive Strategy.
- M for Motivation and Training.
- A for Actionable Intelligence.
- D for Dashboard-based Key Result Areas and Key Performance Indicators.
- H for Harnessing Technology.
- A for Action Plan for Each Theatre.
- N for No access to Financing.

Need for the doctrine

- There are 10 LWE affected states- Bihar, Odisha, Uttar Pradesh, Maharashtra, Chhattisgarh, Jharkhand, West Bengal, Andhra Pradesh, Telangana and Madhya Pradesh.
- As many as 12,000 citizens had lost their lives in Maoist violence over the last two decades. Of these, 2,700 were jawans of security forces and 9,300 were innocent common people.

Government's strategy to tackle left wing extremism

- Alongside aggressive operations, road construction works, setting up of telecommunication, power and railway facilities in the remote areas will be expedited.
- The home minister has also stressed for befitting strategies during the security operations and enhanced intelligence in tackling the Maoists.
- Economic resources play an important role in any war — only when money is available is it possible to buy, eat, drink and possess ammunition and weapons. Therefore, choking the financial resources of the left wing extremists is the most basic mantra in this fight.

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#NaxalSAMADHAN

S Smart Leadership

A Aggressive strategy

M Motivation and training

A Actionable intelligence

D Dashboard based Kpls

H Harness technology

A Action plan for each theatre

N No access to financing

8 Pillars of fighting Left Wing Extremism

7.6   Supreme Court's Integrated Case Management Information System

- Prime Minister Narendra Modi has inaugurated Supreme Court's Integrated Case Management Information System (ICMIS).
- This digital filing system will mark Supreme Court's first towards becoming a paperless, digital court.

ICMIS

- The Integrated Case Management Information System or ICMIS is described as the next generation hybrid database which is used to better enable litigants to access and retrieve information online.
- The new system is aimed at serving as a digital repository for case-related information.

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- Its functions include the option of e-filing cases, checking listing dates, case status, online service of notice/summons, office reports and overall tracking of progress of a case filed with the apex court registry.
- It is also proposed that it will operate as an online gateway for payment of court fee and process fee.
- Other features offered under the new system include an online court fee calculator. This is expected to streamline the filing process for both the advocates and the registry.
- Subsequently, all High Courts, District Courts, Sub-Division Courts will be integrated with the new system. Later on, all the jails in the country will be Integrated by ICMIS software.

Significance of the ICMIS

- ICMIS will help litigants access data and obtain information about the filing, delays etc. It would pave way for the integration of all courts in the country.
- The appellant hereafter is not required to file the records as the records will be picked up electronically from trial courts and high courts.
- The digital filing system will also help in ushering transparency as nothing can be manipulated with this paperless system.
- Also, the litigants will be able to know the progress of the case on real time basis.

7.7   Kambala Bill to be sent again to President with minor modifications

- Kambala is an annual Buffalo Race held traditionally under the auspices of local land lords and households or Patel of village, in coastal Karnataka, India.
- The Kambala season generally starts in November and lasts until March.
- The contest generally takes place between two pairs of buffaloes, each pair raced in wet rice fields, controlled by a whip-lashing farmer.
- The 'track' used for Kambala is a paddy field filled with slush and mud.
- The "Kambala Committee" is formed and it usually arranges Kambala in several categories.
- People place massive bets on the buffaloes to win and one can witness more than 20,000 spectators in a well-organised Kambala, egging on and cheering the buffaloes to complete the race.
- In traditional form of Kambala, racing is non-competitive, and buffalo pairs run one by one in paddy fields.
- A ritualistic approach is also there, as some agriculturists race their buffaloes for thanks giving (to god) for protecting their animals from diseases.
- The buffaloes developed for the race are carefully fed and some owners of the buffaloes have even built separate swimming pool for competing buffaloes.

Why in news?

- The Union Home Ministry has asked Karnataka to modify the Prevention of Cruelty to Animals (Karnataka Amendment) Bill, 2017, and resend it for legalising kambala, the traditional buffalo slush race.
- Union Home Ministry has suggested to the government to modify or omit the phrase "subject to such other conditions as may be prescribed" in sub-section 2 of section 3, in the Bill.
- The phrase opens the window for inclusion of more such sports involving animals through government notifications in the future, as the Centre was keen to prevent such powers to the State government.
- As per the modification sought, State government's powers to include more sports or races involving animals by notifications in future will be clipped.
- The Karnataka Legislative Assembly had cleared the Bill in February 2017. Governor had referred the Bill to the President for his assent. The Bill seeks to exempt kambala and bullock-cart racing from the ambit of the Prevention of Cruelty to Animals (PCA) Act, 1960.

7.8   Amicus curiae in hearing of 'triple talaq'

- The Supreme Court allowed former union minister Salman Khurshid to assist it as an amicus curiae in hearing of pleas challenging the constitutional validity of 'triple talaq', 'nikah halala' and polygamy among Muslims.
- Amicus Curiae can be a person or group that is not a party to a lawsuit but has a strong interest in the matter.
- He/she or the group seeks a permission to submit a brief in the action with the intent of influencing the court's direction.

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8. PERSONALITIES

8.1   Stamp on Ramanujacharya's 1,000th birth anniversary

- A commemorative stamp has been released on the 1,000th birth anniversary of Saint Ramanujacharya.
- Ramanuja was a Hindu theologian, philosopher, and one of the most important exponents of the Sri Vaishnavism tradition within Hinduism.
- He is famous as the chief proponent of Vishishtadvaita subschool of Vedānta.
- He wrote influential texts, such as bhāsya on the Brahma Sutras and the Bhagavad Gita, all in Sanskrit.

8.2   Neeru Chadha becomes first Indian woman to be member of International Tribunal for the Law of the Sea

- In a significant victory for India at the UN, international law expert Neeru Chadha has won a crucial election to a top UN judicial body that deals with disputes related to the law of the sea.
- With this, she becomes the **first Indian woman** to be appointed as a judge at the tribunal.
- Chadha, an eminent lawyer and the first Indian woman to become the chief legal adviser in the ministry of external affairs, is elected for a nine-year term from 2017 to 2026.
- Chadha is only the second woman to be judge of ITLOS in its two decades of existence, where there have been a total of 40 judges.

ITLOS
- **International Tribunal for the Law of the Sea (ITLOS)** is an intergovernmental organisation under the ambit of the United Nations, established in 1996.
- ITLOS governs the laws on international waters and is one of dispute settlement mechanisms under the UN Convention on the Law of the Sea (UNCLOS).
- The Tribunal has the power to settle disputes between party states.
- India is also a signatory to this convention.
- It is headquartered in Hamburg, Germany.
- The ITLOS comprises of 21 serving judges.

8.3   Justice PN Bhagwati

- Former Chief Justice of India PN Bhagwati who is considered as a pioneer of Judicial Activism has passed away.
- Justice Bhagwati introduced the concepts of Public Interest Litigation (PIL) and absolute liability to the Indian judicial system.

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- He made the famous ruling that there was no need for a person to have any Locus Standi to approach the court on the issue of fundamental rights.

8.4   Amitabh Bachchan appointed as WHO's goodwill ambassador for hepatitis

- World Health Organization (WHO) has appointed Amitabh Bachchan as its Goodwill Ambassador for Hepatitis in South-East Asia Region.

- He has been appointed to boost awareness to stop the spread of hepatitis.

- Hepatitis viruses is one of the common cause of liver damage but other infections, toxic substances such as alcohol, certain medicine, food contaminants, bad lifestyle and autoimmune diseases may also result in chronic hepatitis.

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9. SPORTS AND AWARDS

9.1   22nd APEDA Annual Award

- Recently, the **22nd annual award of Agricultural and Processed Food Products Export Development Authority (APEDA)** has been organized.
- APEDA is an apex body of the Ministry of Commerce, Government of India, to promote the export of agricultural commodities and processed food products.
- APEDA links Indian exporters to global markets besides providing comprehensive export oriented services.
- APEDA provides referral services and suggest suitable partners for joint ventures.
- APEDA's export basket ranges from typically Indian ethnic products like pickles, chutneys, sauces, curries etc. to rice, honey, fresh and processed fruits and vegetables, beverages, guar gum, poultry, livestock products, confectionery, cut flowers, food grains, aromatic plants and other Indian delicacies.
- Vietnam, UAE, Saudi Arabia, USA, Iran, Iraq and Nepal are the major destinations for export of food products from India.

9.2   Man Booker International prize

- Israeli author David Grossman has won the Man Booker International Prize for his novel **"A Horse Walks Into a Bar"**.
- He has become the first Israeli author to win the Man Booker International Prize.
- Last year, the prize was won by South Korean author Han Kang for her novel The Vegetarian.
- The Man Booker Prize is world's most prestigious English-language literary award.
- It was launched in 1969 and presented by the Man Group.
- The international edition of the Man Booker Prize was introduced in 2005. From 2016, the prize is awarded for a single work of fiction that has been translated into English and published in the United Kingdom.

9.3   'Project Jal Sanchay' chosen for national award

- 'Project Jal Sanchay' has been selected for the national award for excellence in the Mahatma Gandhi national rural employment guarantee programme (MGNREGP), by the ministry of rural development.
- 'Project Jal Sanchay' is a model of water conservation adopted successfully by the authorities in Nalanda district of south central Bihar.

Evolution of the project

- Nalanda has been an agriculture oriented district, but it always remained affected by drought like conditions, which impacted cultivation and farm production. Though, during monsoon there

were flash floods in the area, the water runoff used to be so high that within 15 days the entire water got washed away.

- It was under these conditions that 'project jal sanchay' was launched under MGRNREGP, to offer farmers a wide spectrum of solutions to their water crisis.

About the project

- Under the project, check dams and traditional Aahar-Pyne irrigation systems were created.

- In addition, traditional water bodies were desilted and renovated.

- Campaigns about the usefulness of rainwater harvesting were also carried out.

- The project was a mix of modern day techniques and technologies with traditional knowledge and got evolved into a holistic program to conserve water.

- As a result of the implementation of the project, availability of water got improved drastically which positively impacted the farm production in the district.

10. SCIENCE AND TECHNOLOGY

10.1   Aquatic animal diseases revisited

- The national surveillance programme for aquatic animal diseases in India, one of the largest fish disease surveillance programme implemented in the country, is all set to begin a new phase.
- A road map proposed for taking the surveillance programme to the next level includes developing disease-free zones and targeted active surveillance for fish pathogens in India.

About the programme:

- The programme is led by the ICAR-National Bureau of Fish Genetic Resources (ICAR-NBFGR).
- The programme includes monitoring of the disease status of susceptible populations and would provide a general picture of prevalence of diseases in the country.
- It will also provide a means for rapid detection of new and exotic infectious diseases through advanced diagnostic techniques; help in certifying freedom from diseases of concern within a defined geographical area or a specific population and give boost to our aquatic animal exports.
- The programme is currently being implemented in 16 States and three Union Territories.

Objectives of disease surveillance programme

- To provide means for rapid detection of new and exotic infectious disease.
- To provide evidence of freedom from diseases of concern within a defined geographical area or a specific population.
- To collect the information on distribution and occurrence of diseases of concern.
- To assess the efficiency of disease control programmes with a defined geographical area.
- To improve reporting requirements to World organization for Animal Health (OIE) and regional Quartely Aquatic Animal Disease Reporting System and enhance compliance to OIE standards.

Importance of this programme:

- The programme would result in assessing the efficiency of disease control programmes.
- It will also help in developing appropriately trained and dedicated personnel who can understand normal health patterns and describe the abnormalities.
- Finally, this programme will help in providing scientifically accurate and cost-effective information for assessing and managing risks of pathogen transfer associated with trade in aquatic animals and improve production efficiency.

10.2   Railways to acquire EOTT system to run trains without guards

- The Indian Railways has planned to acquire the End of Train Telemetry (EoTT) equipments to run nearly 1,000 trains without guards in the current fiscal.
- All goods trains on the proposed dedicated freight corridors will run with EoTT system.
- Railways had earlier undertaken the trial run of the EoTT system successfully.

EoTT

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- The end of train telemetry (EoTT), a device that aims to establish communication between the locomotive driver and the last vehicle of the train, will be fitted in the last coach or wagon of a train.

How it works?

- EoTT system comprises two units one unit called cab display unit (CDU) fitted on the locomotive and the other is sense and brake unit (SBU) fitted on the last coach or wagon of the train.

- Both the units are fitted with radio transmitter which communicate with each other. A transmitter is fitted on a locomotive and a receiver is fitted at the end of the last vehicle.

- The transmitter and the last vehicle receiver exchange signals periodically to ensure that the train is running intact.

- If there is a break in the communication between the two units, the driver gets a signal that the train has parted and accordingly train has to be stopped to relink the parted wagons.

10.3   BrahMos missile achieves rare feat

- The Army recently carried out a successful test of the advanced BrahMos Block III Land Attack Cruise Missile (LACM) in the Andaman and Nicobar Islands.

- This is the fifth consecutive time when the Block-III version of BrahMos LACM has been successfully launched and hit the land-based target in "top-attack" mode, an incredible feat not achieved by any other weapon system of its genre.

- These tests were carried out in full operational land-to-land configurations from Mobile Autonomous Launchers (MAL) at full-range.

10.4   'Spyder' surface-to-air missile

- India recently test fired a surface-to-air missile **Spyder (Surface-to-air PYthon and DERby)** from a test range in Odisha as part of missile launch practice of a series of tests of the short-range quick reaction.

- Spyder is an acquired missile system from Israel which is a short-range, quick reaction surface-to-air missile to neutralise enemy targets up to a distance of 15 km and at heights between 20-and-9,000 metres.

- Spyder is however, shorter than India's indigenously developed surface-to-air 'Akash' missile, which has a strike range of 25 km.

- Spyder is an all-weather missile which has an automatic process of engaging an aggressive aircraft or missile. Besides aircraft and UAVs, it can also neutralise low-level cruise missiles.

10.5   NASA's Orion spacecraft passes key safety tests

- NASA's Orion spacecraft has successfully completed a series of tests for its critical safety systems.
- Researchers tested the abort motor for Orion's launch abort system.

Orion spacecraft

- The Orion spacecraft was designed to take astronauts to deep space destinations such as the Moon and Mars.
- Orion will serve as the exploration vehicle that will carry the crew to space, provide emergency abort capability, sustain the crew during the space travel, and provide safe re-entry from deep space return velocities.
- Orion will launch on NASA's new heavy-lift rocket, the Space Launch System.

What is the abort system?

- The launch abort system is an important part of making sure crew members stay safe on the launch pad and on their way to space.
- The launch abort system is positioned on top of the Orion crew module and will play a critical role protecting future crews travelling to deep space destinations in Orion.
- The abort motor is responsible for propelling the crew module away from the Space Launch System rocket in case of an emergency, and one of three total motors that will send the crew module to a safe distance away from a failing rocket and orient it properly for a safe descent into the Atlantic Ocean if such a situation ever occurs.

10.6   Ebola resurfaces in Africa

- The World Health Organization has declared an Ebola outbreak in the Democratic Republic of Congo (DRC), Africa.
- More than 11,000 people died in the Ebola outbreak in West Africa in 2014-2015, mainly in Guinea, Sierra Leone and Liberia.
- The last outbreak in the DRC was in 2014 and killed more than 40 people. The region affected lies 1,300 km north-east of Kinshasa, close to the border with the Central African Republic.
- While this outbreak will be worrying for communities in this remote part of the DRC, health workers say the country is experienced in fighting the virus.
- Experts say an experimental vaccine could be used if needed.

Ebola

- Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans.
- The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.

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- The average EVD case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks.
- Community engagement is key to successfully controlling outbreaks. Good outbreak control relies on applying a package of interventions, namely case management, infection prevention and control practices, surveillance and contact tracing, a good laboratory service, safe burials and social mobilisation.
- Early supportive care with rehydration, symptomatic treatment improves survival.
- There is as yet no licensed treatment proven to neutralize the virus but a range of blood, immunological and drug therapies are under development.

Ebola virus disease

Ebola, which first appeared in outbreaks in Sudan and DR Congo in 1976, is a severe and often fatal disease with no known specific treatment or vaccine. It has since killed more than 1,500 people in parts of Africa.
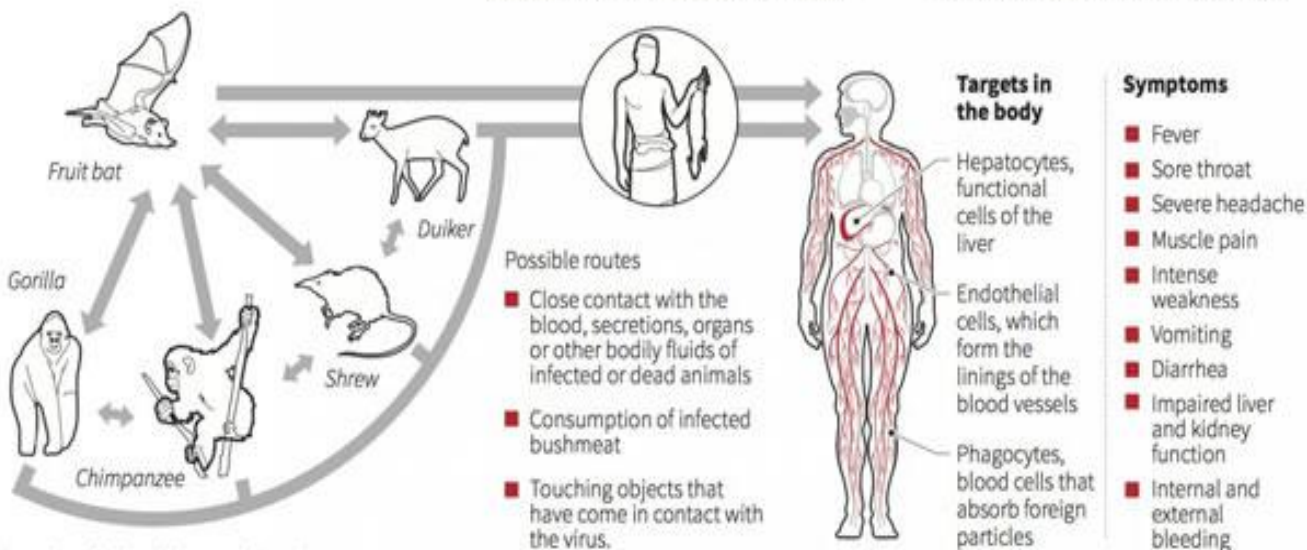
SOURCE
In Africa, particular species of fruit bats are considered possible natural hosts for Ebola virus.

TRANSMISSION
Infected bats are thought to transmit the disease to humans, or indirectly through other animals which are hunted for their meat.

DAMAGE
Incubation period is from two to 21 days. Death from the disease is often caused by multiple organ failure and tissue death.

Fruit bat

Duiker

Gorilla

Shrew

Chimpanzee

Possible routes
- Close contact with the blood, secretions, organs or other bodily fluids of infected or dead animals
- Consumption of infected bushmeat
- Touching objects that have come in contact with the virus.

Targets in the body

Hepatocytes, functional cells of the liver

Endothelial cells, which form the linings of the blood vessels

Phagocytes, blood cells that absorb foreign particles

Symptoms
- Fever
- Sore throat
- Severe headache
- Muscle pain
- Intense weakness
- Vomiting
- Diarrhea
- Impaired liver and kidney function
- Internal and external bleeding

Note: List of animals is not exhaustive.
Sources: Centers for Disease Control and Prevention; World Health Organisation

G.Cabrera, 28/03/2014

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10.7   World's largest floating solar farm

- China has recently launched the world's largest floating solar farm.
- This launch is the reflections of China's clean energy ambitions especially after the United States withdraws from the Paris climate accord.
- The 40-megawatt power plant has 160,000 panels resting on a lake that emerged after the collapse of a coal mine in central China's Anhui Province
- The farm is part of authorities' effort to reduce dependency on fossil fuel as China remains one of the world's top carbon emitters, with two-thirds of its electricity still fuelled by coal.

10.8   Tarang Sanchar

- It is a portal launched by telecom department.
- It allows people to track radiation emitted from mobile towers within a locality and check their compliance with the stipulated norms.
- It is aimed at clearing "myths and misconceptions" about mobile towers and emissions from them.

10.9   Successful Flight Test of ATGM Nag

- The **Anti-Tank Guided Missile – 'Nag'** was successfully flight tested in the desert ranges of Rajasthan.
- Nag is a third-generation, fire-and-forget, anti-tank guided missile.
- It is developed by India's state-owned Defence Research and Development Organisation (DRDO) to support both mechanised infantry and airborne forces of the Indian Army.
- The missile incorporates an advanced passive homing guidance system and possesses high single-shot kill probability.
- It is designed to destroy modern main battle tanks and other heavily armoured targets.
- Nag can be launched from land and air-based platforms.
- The land version is currently available for integration on the Nag missile carrier (NAMICA), which is derived from a BMP-2 tracked infantry combat vehicle.
- The Nag missile was indigenously developed under the Indian Ministry of Defence's integrated guided missile development programme (IGMDP), which also involved the development of four other missiles that are Agni, Akash, Trishul and Prithvi.

10.10   NASA's inflatable greenhouse could feed astronauts on Mars

- NASA Scientists have designed an inflatable greenhouse that could be used one day by astronauts to grow fresh food and produce oxygen on Mars or Moon.
- The first-of-its-kind sample involves an inflatable, deployable greenhouse that can support plant and crop production for nutrition, air revitalisation, water recycling and waste recycling.

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- The new approach uses plants to scrub carbon dioxide while providing food and oxygen for those working in deep space.
- This way the carbon dioxide exhaled by the astronauts will be introduced into the greenhouse and the plants would then generate oxygen through the process of photosynthesis.
- Similarly, the water cycle too would begin with water brought along or found at the lunar or Martian landing site. The water would be oxygenated, given nutrient salts and it would continuously flow across the root zone of the plants and then return to the storage system.
- Currently, scientists are conducting tests on the Prototype Lunar Greenhouse to determine what plants, seeds or other materials should be taken along to make the system work.
- Besides this, NASA Scientists are developing systems to harness resources such as water that should be available in certain areas of the lunar or Martian surface in order to support missions that last for months or years.
- While prior to this, astronauts have successfully grown plants and vegetables aboard the International Space Station (ISS), NASA wants to develop long-term methods to help sustain pioneers working in deep space.

10.11 Multidrug-resistant TB will rise in India, says new study

- According to a study, Multidrug Resistant-Tuberculosis (MDR-TB), a version of the disease where patients do not respond to first-line drugs, will become more common than it is now.
- The report projects that, by 2040, the percentage of MDR-TB will make up 32.5% of all TB cases in Russia, 12.4% of the TB cases in India, 8.9% of the TB cases in the Philippines, and 5.7% of all TB cases in South Africa.

As per the report,

- India is home to the most serious 'hotspots' of MDR-TB transmission, especially overcrowded cities such as Mumbai.
- Not only does India shoulder the highest TB burden in the world, with over 2 million of the 10 million reported cases, it also accounts for the most drug-resistant patients — nearly 1.3 lakh people who do not respond to first-line drugs.
- Besides, access to medicines is also worrying. Two new TB drugs, Bedaquiline and Delamanid are being used in Europe and the U.S. for several years. But they are yet to be made available in India's national healthcare system.
- The drug is available only in six sites across the country, and according to the Health Ministry's TB report, only 207 of the 79,000 patients who need the drug have access to it.
- It is estimated that each year there are 10.4 million new cases of TB, leading to 1.8 million deaths globally.
- Nearly 40% of all drug-resistant cases occur in Russia, India, the Philippines, and South Africa – accounting for more than 230,000 cases of drug-resistant disease in 2015.

Tuberculosis (TB)

- Tuberculosis (TB) is a disease caused by bacteria that are spread from person to person through the air.
- TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine.
- In most cases, TB is treatable and curable; however, persons with TB can die if they do not get proper treatment.

Multidrug-resistant tuberculosis (MDR TB)

- Multidrug-resistant TB (MDR TB) is caused by an organism that is resistant to at least **isoniazid** and **rifampin**, the two most potent TB drugs. These drugs are used to treat all persons with TB disease.

How does drug resistance happen?

- Resistance to anti-TB drugs can occur when these drugs are misused or mismanaged. Examples include when patients do not complete their full course of treatment; when health-care providers prescribe the wrong treatment, the wrong dose, or length of time for taking the drugs; when the supply of drugs is not always available; or when the drugs are of poor quality.

Extensively drug resistant tuberculosis (XDR TB)

- Extensively drug resistant TB (XDR TB) is a rare type of MDR TB that is resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin).
- Because XDR TB is resistant to the most potent TB drugs, patients are left with treatment options that are much less effective.
- XDR TB is of special concern for persons with HIV infection or other conditions that can weaken the immune system. These persons are more likely to develop TB disease once they are infected, and also have a higher risk of death once they develop TB.

10.12 Scientists use satellites to count endangered birds from space

- Scientists from Britain and New Zealand have started counting individual Northern Royal Albatrosses from space, the first time ever that the global population of a species has been assessed from orbit.
- Using the highest-resolution satellite images available, scientists are calculating the number of the endangered albatrosses, which breed on New Zealand's remote and virtually inaccessible Chatham Islands.
- The study used the DigitalGlobe WorldView-3 satellite, which can observe objects as small as 30 cm across, to locate and count the birds.

10.13 Scientists conjure up largest virtual universe

- Researchers from the University of Zurich have simulated the formation of our entire universe with a large supercomputer.

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- A gigantic catalogue of about 25 billion virtual galaxies has been generated from 2 trillion digital particles.
- It was created with a simple goal in mind: train the next big mission from the European Space Agency (ESA).
- This catalogue is being used to calibrate the experiments on board the Euclid satellite, that will be launched in 2020 with the objective of investigating the nature of dark matter and dark energy.

Dark energy and dark matter:
- Dark energy is the cause of the accelerated expansion of the universe. Dark matter, instead, is responsible for how galaxies keep their shape.
- About 95 per cent of the universe is dark. The cosmos consists of 23 per cent of dark matter and 72 per cent of dark energy.

10.14 Patna HC sets aside ban on ENA

- The **Extra Neutral alcohol or ENA is a high distillated alcohol** without any impurities and others destinated to be used in the high cosmetic industry, perfumeries as well as for the production of alcoholic beverages such as whisky, vodka, gin, cane, liqueurs and alcoholic fruit beverages and aperitifs.

Why in news?
- The Patna High Court has set aside the Bihar government's decision to ban production of Extra Neutral Alcohol (ENA) by several distillery and liquor companies in the State.
- The verdict meant that investment to the tune of Rs. 100 crore had been safeguarded.

Issue
- After imposing total prohibition last year in April, the government on January 24 this year issued a notification saying the licences of ENA manufacturers would not be renewed.
- However, a petition was filed in the court challenging the notification. The petitioners submitted they had been given the licence to produce ENA, also known as industrial alcohol, after the government imposed total prohibition through its notification dated October 2, 2016.

Court's remarks
- The government had no right to ban production of ENA as it is used in various other industries apart from making liquor.
- The State does not have legislative competence to deal with the subject of alcohol unfit for human consumption.
- The court said that we see no reason to hold the provisions of Sections 13, 23 and 24(1) of the Prohibition Act as unconstitutional or ultra vires, as in the light of the declaration with respect to including ENA within the definition of Intoxicant to be not permissible, the applicability of these provisions to alcohol unfit for human consumption does not arise now.

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10.15 Now, turn any surface into touchscreen with a spray paint

- Scientists have developed a new technology that can turn any surface — including walls, furniture and steering wheels — into a touchscreen using tools as simple as a can of spray paint.
- For this, the scientists used a well-known technique called electric field tomography.
- With the new technology dubbed Electrick, conductive touch surfaces can be created by applying conductive paints, bulk plastics or carbon-loaded films among other materials.
- The "trick" is to apply electrically-conductive coatings or materials to objects or surfaces, or to craft objects using conductive materials.
- By attaching a series of electrodes to the conductive materials, researchers showed they could use a well-known technique called electric field tomography to sense the position of a finger touch.

10.16 Molecule Disarib

- It is a novel small molecule, designed and synthesised by Indian researchers.
- It has shown promise in targeted killing of cancer cells.
- It works by binding itself to a protein called BCL2, which suppresses the death of cancerous cells
- While BCL2 protein is produced in excess in cancer cells, its expression is almost undetectable in normal cells. Hence, Disarib targets and kills only cancer cells while sparing normal cells.

10.17 ISRO-made system to alert users at unmanned level crossings

- Satellite-based chip systems will now alert road users at unmanned level crossings about approaching trains and also help in tracking train movement on a real-time basis.
- On a pilot basis, the Mumbai and Guwahati Rajdhani trains will be equipped with this system.
- According to the plan, more trains will be equipped with such technology in a phase-wise manner.

How will it work?

- Road users will be warned by hooters once a train approaches an unmanned level crossing as railways are installing ISRO-developed integrated circuit (IC) chips on locomotives of trains.
- There will be hooters at 20 unmanned level crossings on Rajdhani routes for Guwahati and Mumbai.
- About 500 metres before the level crossings, the hooter will be activated through the IC chip, warning road users as well as the train driver near the crossing.
- The hooter will be louder as the level crossing nears, and finally it will be silent after the train passes by.
- Besides alerting road users, the satellite-based system will also be used for tracking trains for disseminating information about their movement on real time basis. This will be of great help to passengers as currently train movements are tracked manually.

- The satellite-based system will also help railways in mapping the area and the technology will come in handy at the time of accidents when it can be used to ascertain the exact location of trains and topography.

Need for the system

- Safety at unmanned level crossings is a cause of serious concern for railways and the public transporter is exploring various ways to address the issue.
- There are about 10,000 unmanned railway crossings in the country which account for around 40 per cent of accidents involving the railways.
- While the Railways have eliminated 1,148 unmanned crossings in 2014-15 and 1,253 in 2015-16, it has scaled up its target and now plans to eliminate all such crossings in the next 2 to 3 years.

10.18 Govt. regulator gives nod for GM mustard

- India's central biotech regulator, Genetic Engineering Appraisal Committee (GEAC) has cleared the genetically modified (GM) Mustard for commercial cultivation and recommended its approval to the environment ministry.
- The GM mustard, developed by a Delhi University institution, is only the second food crop which got its clearance from the central regulator.
- The GEAC had earlier in 2010 cleared the Bt Brinjal but the decision was not accepted by then environment minister Jairam Ramesh.
- Currently, only Bt Cotton – a non-food GM crop – is commercially cultivated in the country.
- An application for commercial release of the GM Mustard was filed in December 2015.
- The GEAC had subsequently set up a sub-committee to examine the safety aspect of the use of transgenic variety of the mustard. The sub-committee had last year given its safety clearance while noting that the GM Mustard is safe for human consumption and environment.
- Decision of the GEAC was, however, vehemently opposed by environmentalists and anti-GM groups.

Genetically modified crop

- Genetically modified crops (GMCs, GM crops, or biotech crops) are plants used in agriculture, the DNA of which has been modified using genetic engineering techniques.
- In most cases, the aim is to introduce a new trait to the plant which does not occur naturally in the species.
- Examples in food crops include resistance to certain pests, diseases, or environmental conditions, reduction of spoilage, or resistance to chemical treatments (e.g. resistance to a herbicide), or improving the nutrient profile of the crop.
- Examples in non-food crops include production of pharmaceutical agents, biofuels, and other industrially useful goods, as well as for bioremediation.

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- Potential benefits of GM plants include higher crop yields, reduced farm costs, increased farm profit, improvement in health and the environment.
- Potential risks of GM plants include the potential for pests to evolve resistance to the toxins produced by GM crops, the danger of unintentionally introducing allergens and other anti-nutrition factors in foods, the likelihood of transgenes escaping from cultivated crops into wild relatives, the risk of these toxins affecting non-target organisms.

GEAC

- The Genetic Engineering Appraisal Committee (GEAC) is the apex body constituted in the Ministry of Environment and Forests.
- It was set up under 'Rules for Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or Cells 1989', under the Environment Protection Act, 1986.
- The GEAC approves activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- It is also responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials (Biosafety Research Level trial-I and II known as BRL-I and BRL-II).

Authorities under the Rule of 1986

- The Rules of 1989 also define five competent authorities for handling of various aspects of the rules.
    1. Institutional Biosafety Committees (IBSC),
    2. Review Committee of Genetic Manipulation (RCGM),
    3. Genetic Engineering Approval Committee (GEAC),
    4. State Biotechnology Coordination Committee (SBCC) and
    5. District Level Committee (DLC).

10.19 eVIN Project of Health Ministry becomes global best practise in immunisation

- India's electronic vaccine intelligence network project also known as eVIN project has got the attention of five countries.
- Philippines, Indonesia, Bangladesh, Nepal and Thailand are mulling to replicate India's immunisation project.

eVIN project

- eVIN is an indigenously developed technology system in India that digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application.
- The eVIN is presently being implemented across twelve states in India.

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- eVIN aims to support India's 'Universal Immunisation Programme' by providing real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in states.
- The project is being implemented by the United Nations Development Programme (UNDP).
- eVIN provides an integrated solution to address widespread inequities in vaccine coverage by supporting state governments in overcoming constraints of infrastructure, monitoring and management information systems and human resources, often resulting in overstocking and stock-outs of vaccines in storage centres.

The integrated solution combines:
Technology:

- To facilitate evidence-based decision-making by making available online real-time information on vaccine stocks and storage temperature through the eVIN application software and temperature loggers;

Governance

- To ensure efficient vaccine logistics management by systemizing record keeping through standardizing stock and distribution registers; identifying gaps and improving clarity on vaccine cold chain network; drawing attention to infrastructure upgrades; developing standard operating procedures; and encouraging good practices;

Human Resources

- To empower the state cold chain network by building the capacities of government cold chain handlers; and deploying vaccine and cold chain managers in every district for constant support to estimate vaccine requirements, supervise cold chain handlers and coordinate with cold chain technicians across the district.

10.20 European XFEL generates its first laser beam

- The biggest X-ray laser in the world, the European XFEL, has generated its first X-ray laser light and is now considered ready for its official opening in September.

European XFEL

- The European x-ray free electron laser (European XFEL) is an X-ray research laser facility.
- It is housed in underground tunnels inside a 3.4km-long facility at the DESY accelerator centre in Germany.
- Eleven countries are involved in the European XFEL.
- It produces X-rays through the acceleration of electrons, the so-called synchrotron radiation.
- There are currently only five X-ray lasers in the world. The European XFEL is the largest and most powerful of the group.
- The machine works by creating synchrotron radiation in X-ray range, emitting electrons that are accelerated to close to the speed of light. Then, a powerful linear accelerator helps create the laser light, which is a billion times brighter than conventional synchrotron light sources.

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Significance

- According to researchers, XFEL will create the fastest and most powerful laser pulses on the planet. This will help many biological, chemical, and physical experiments. For example, it could aid the study of biomolecules, leading to better, more effective disease treatments.
- It also could create more research into chemical processes and their catalysts, shedding light on new ways to help protect the environment.
- The X-rays can be used to make pictures and films of the nanocosmos at atomic resolution – such as of biomolecules, from which better understandings of the basis of illnesses or the development of new therapies could be developed.

10.21 A way to use water to convert methane into methanol

- A team of researchers from Switzerland has developed a one-step process that uses water to convert methane to methanol.

Conversion

- Water is used to oxidize methane over a bed of copper containing zeolite—the unique structure of the mineral lets the water behave as an oxidant.
- The team claims the process is 97 percent efficient, emitting only methanol and hydrogen.
- The method is simple and easy enough that it could be used at drilling sites and the resulting methanol could be used as a liquid fuel or as an ingredient in making resins or plastics.
- The hydrogen could be used in any number of ways, including in fuel cells.

Significance of the research

- A new way to turn methane into methanol using only water could help to significantly cut carbon emissions by ending gas flaring at oil fields and create a useful chemical feedstock at the same time.
- The direct oxidation of methane to methanol would therefore be a highly attractive industrial process as Methanol is a valuable source of industrial chemicals and over 30 million tonnes are consumed every year.

Present practice of conversion

- Currently, commercial methanol production requires the endothermic conversion of methane to synthesis gas – a mixture of carbon monoxide and hydrogen – which is then converted to methanol. This is only feasible in huge facilities, so remote oil-extraction facilities often simply burn any methane produced.

Methane

- Methane has been identified as a greenhouse gas.
- It is perhaps more of a problem even than carbon dioxide because it traps more heat (some studies have suggested 25 times as much)—fortunately, not nearly as much of it is emitted by humans into the atmosphere.
- It makes its way into the atmosphere due to animal flatulence and some industrial processes.

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- It is also a byproduct at gas wells, where it is generally burned.
- Methanol, on the other hand, has been considered a good alternative to gasoline for use in automobile engines. It is currently made using a variety of techniques and basic materials including coal, natural gas and even municipal waste.

10.22 Council of Scientific & Industrial Research (CSIR) signs Agreement with the Metal Industries Development Institute (MIDI), Ethiopia

- The Council of Scientific and Industrial Research (CSIR) has entered into an agreement with the Metal Industries Development Institute (MIDI), Ethiopia to implement a twinning programme.
- The MoU is aimed at R&D capacity building of MIDI.
- CSIR has clinched this multi-million US dollar assignment through a process where many international organisations were considered.
- The twinning is one of the largest programs (in terms of contractual amount) between a CSIR institute and a foreign entity.

CSIR

- Council of Scientific and Industrial Research (CSIR), established in 1942, is an autonomous body and the largest research and development (R&D) organisation in India.
- Although it is mainly funded by the Ministry of Science and Technology, it operates as an autonomous body registered under the Registration of Societies Act of 1860.
- The research and development activities of CSIR includes aerospace engineering, Structural engineering, ocean sciences, Life sciences, metallurgy, chemicals, mining, food, petroleum, leather, and environment.

10.23 Congenital Adrenal Hyperplasia (CAH)

- Parents of a CAH child, have started a support group called 'CAH Support India' (www.cahindia.org) involving a community of parents, grandparents and caregivers of CAH children.
- The International Coalition for Endocrine Patient Support Organisations worldwide has listed this support group as the first such group for endocrine disorders in India.
- CAH is an inherited disorder that affects the adrenal glands where the glands cannot produce cortisol and aldosterone, and instead produce an unwanted excess amount of androgens.
- A child with CAH lacks enzymes the adrenal glands use to produce hormones that help regulate metabolism, the immune system, blood pressure, and other essential functions.
- Parents with children suffering from it often have great difficulty in the upbringing of the child, including treatment, getting school admission and other support issues.

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10.24 Banganapalle mango gets GI tag

- The Banganapalle mango received a Geographical Indication (GI) tag.
- This makes Andhra Pradesh the proprietor of the variety known for its sweetness.
- The Andhra Pradesh government is the registered proprietor of the GI tag for Banganapalle mangoes, often hailed as "the king of fruits."

About Banganapalle mango

- Banganapalle mango is generally known as The King of Mangoes. It also known as Beneshan, Baneshan, Benishan, Chappatai and Safeda.
- These mangoes are large sized, weighing on an average 350-400 grams.
- The pulp is fibreless, firm and yellow with sweet taste.
- Their skin has very light spots, stone is oblong in shape and has very thin seed with sparse and soft fibre all over.
- These mangoes have been grown for over 100 years in the state.
- The primary centre of origin of the fruit is Kurnool district comprising Banaganapalle, Paanyam and Nandyal mandals.

What is GI tag?

- A GI tag indicates that the product comes from a specific region.
- GI is covered under the Intellectual Property Rights and the Trade Related Aspects of Intellectual Property Rights.
- A GI tag certifies the origin of a product or produce from a particular region as the quality or other features of the product are attributable only to the place of its origin.
- The tag helps farmers or manufacturers, as the case may be, to get a better price in the market.

10.25 3D printed cartilage to treat osteoarthritis

- Researchers have successfully generated cartilage tissue using a 3D bioprinter, an advance that could lead to new treatments for osteoarthritis.
- The advance represents a giant step forward in the ability to generate new, endogenous cartilage tissue.

How was it developed?

- The team used cartilage cells harvested from patients who underwent knee surgery, and these cells were then manipulated in a laboratory, causing them to rejuvenate and revert into "pluripotent" stem cells — cells that have the potential to develop into many different types of cells.
- The stem cells were then expanded and encapsulated in a composition of nanofibrillated cellulose and printed into a structure using a 3D bioprinter.
- Following printing, the stem cells were treated with growth factors that caused them to differentiate correctly, so that they formed cartilage tissue.

- Each individual stem cell is encased in nanocellulose, which allows it to survive the process of being printed into a 3D structure.

Potential applications

This bioprinted tissue can be used to repair cartilage damage, or to treat osteoarthritis, in which joint cartilage degenerates and breaks down.

10.26 Researchers develop synthetic soft retina

- Scientists from the University of Oxford have developed a synthetic, soft tissue retina that closely mimics the natural retinal process.

What is synthetic soft retina?

- The synthetic, double-layered retina replica consists of soft water droplets (hydrogels) and biological cell membrane proteins.
- Designed like a camera, the cells act as pixels, detecting and reacting to light to create a grey scale image.
- The synthetic material can generate electrical signals, which stimulate the neurons at the back of our eye just like the original retina.

Significance of this discovery:

- Until now, artificial retinal research has used mostly rigid, hard materials. The human eye is incredibly sensitive, which is why foreign bodies like metal retinal implants can be so damaging, leading to inflammation and/or scarring.
- But a biological synthetic implant is soft and water-based, so much more friendly to the eye environment.
- The researchers believe this could lead to the development of less invasive products that closely resemble human body tissues, helping to treat degenerative eye conditions such as retinitis pigmentosa. The condition changes how the retina responds to light, causing people to slowly lose vision.

Retina:

- Just as photography depends on camera pixels reacting to light, vision relies on the retina performing the same function.
- The retina sits at the back of the human eye, and contains protein cells that convert light into electrical signals that travel through the nervous system, triggering a response from the brain, ultimately building a picture of the scene being viewed

In 2014, it was announced that four vaccines will be added to the program, namely rotavirus, rubella and Japanese encephalitis, as well as the injectable polio vaccine.

10.27 Pneumonia vaccine to be part of immunisation drive

- India has rolled out the long-awaited anti-pneumonia vaccine as part of the government's Universal Immunisation Programme (UIP).

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- The vaccine will protect children against severe forms of pneumococcal disease, such as pneumonia and meningitis.
- The three-dose **pneumococcal conjugate vaccine (PCV)** will be rolled out in Mandi, Himachal Pradesh, six districts of Uttar Pradesh and 17 districts of Bihar as a part of the first phase.
- The vaccine will give protection against 13 types of pneumococcal bacteria which cause pneumonia disease.

About Pneumonia

- Pneumonia is caused by inflammation of the airspaces in the lungs. It is most commonly due to an infection.
- It is a leading cause of death for children under the age of five years around the world.
- It may be caused by bacteria, viruses or fungi. The most common bacterial type that causes pneumonia is Streptococcus pneumoniae.
- Signs and symptoms: Fever, chills, cough, shortness of breath, and fatigue.
- Treatment: Vaccinations are available against several common organisms that are known to cause pneumonia.
- Besides, antibiotics can also treat pneumonia by controlling the bacterial or fungal infection.

Pneumococcal disease condition in India

- Pneumococcal disease is the leading cause of vaccine-preventable deaths in children under five years of age globally and in India.
- India accounts for nearly 20 per cent of global pneumonia deaths in this age group.
- In 2010, pneumococcal pneumonia accounted for approximately 16 per cent of all severe pneumonia cases and 30 per cent of pneumonia related deaths in children under- five years of age in India.

UIP

- Universal Immunization Programme is a vaccination program launched by the Government of India in 1985. It became a part of Child Survival and Safe Motherhood Programme in 1992.
- It is currently one of the key areas under National Rural Health Mission(NRHM) since 2005.
- The program consists of vaccination for 10 diseases-
    1. Tuberculosis,
    2. Diphtheria,
    3. Pertussis (whooping cough),
    4. Tetanus,
    5. Poliomyelitis,
    6. Measles,
    7. Hepatitis B,
    8. Diarrhoea,
    9. Japanese Encephalitis and
    10. Hepatitis B was added to the UIP in 2007.

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In 2014, it was announced that four vaccines will be added to the program, namely rotavirus, rubella and Japanese encephalitis, as well as the injectable polio vaccine.

10.28 Large Hadron Collider restarts for 2017 run

- The world's largest and most powerful particle smasher Large Hadron Collider (LHC) has restarted circulating beams of protons for the first time this year, following a 17-week-long extended technical stop.
- Each year, the machines shut down over the winter break to enable technicians and engineers to perform essential repairs and upgrades, but this year the stop was scheduled to run longer, allowing more complex work to take place.
- Work this year included the replacement of a superconducting magnet in the LHC, the installation of a new beam dump in the Super Proton Synchrotron (SPS) and a massive cable removal campaign.
- Among other things, these upgrades will allow the collider to reach a higher integrated luminosity — the higher the luminosity, the more data the experiments can gather to allow them to observe rare processes.

Large Hadron Collider

- The Large Hadron Collider (LHC) is the world's largest and most powerful particle collider, most complex experimental facility ever built, and the largest single machine in the world.
- It was built by the European Organization for Nuclear Research (CERN) between 1998 and 2008 in collaboration with over 10,000 scientists and engineers from over 100 countries, as well as hundreds of universities and laboratories.
- The LHC is based at the European particle physics laboratory CERN, near Geneva in Switzerland.
- The aim of the LHC is to allow physicists to test the predictions of different theories of particle physics, including measuring the properties of the Higgs boson and searching for the large family of new particles predicted by supersymmetric theories, as well as other unsolved questions of physics.
- The collider has four crossing points, around which are positioned seven detectors, each designed for certain kinds of research.
- The LHC's computing grid is a world record holder

10.29 DIPP & WIPO to set up Technology and Innovation Support Centers

- The Department of Industrial Policy and Promotion (DIPP) and World Intellectual Property Organization (WIPO) have signed an agreement to establish Technology and Innovation Support Centers (TISC).

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TISC program

- TISCs will be set up under WIPO's Technology and Innovation Support Centers (TISC) program.
- The programme provides innovators in developing countries with access to locally based, high quality technology information and related services, helping them to exploit their innovative potential and to create, protect, and manage their intellectual property (IP) rights.

Services offered by TISCs may include

- Access to online patent and non-patent (scientific and technical) resources and IP-related publications;
- Assistance in searching and retrieving technology information;
- Training in database search;
- On-demand searches (novelty, state-of-the-art and infringement);
- Monitoring technology and competitors;
- Basic information on industrial property laws, management and strategy, and technology commercialization and marketing.
- The Cell for IPR Promotion and Management (CIPAM) is designated as the National Focal point for the TISC national network.
- As the national focal point, CIPAM shall identify potential host institutions, assess their capacities and support them in joining the TISC project.
- CIPAM will also act as the main intermediary between WIPO and TISC host institutions and coordinateall the activities of the national TISC network.

WIPO

- Created in 1967 "to encourage creative activity, to promote the protection of intellectual property throughout the world, the World Intellectual Property Organization (WIPO) is one of the 17 specialized agencies of the United Nations.
- It has currently 188 member states, administers 26 international treaties, and is headquartered in Geneva, Switzerland.
- Non-members are the states of Marshall Islands, Federated States of Micronesia, Nauru, Palau, Solomon Islands, South Sudan and Timor-Leste. Palestine has observer status.
- India is a member of WIPO and party to several treaties administered by WIPO.
- In the year 1971, the Kodaikanal Observatory became an autonomous society, the Indian Institute of Astrophysics.

10.30 A century of looking at our closest star, the sun

- Data captured over a hundred years and more by the Kodaikanal Solar Observatory in Tamil Nadu has now been digitised by astrophysicists from the Indian Institute of Astrophysics, Bengaluru, and opened up to the public.

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Significance of this data

- Apart from use in academic studies of long-term behaviour of the sun, the data can be used to better understand sunspot activity which impacts climate and affects telecommunication systems.
- It also throws light on major events that had an impact on the earth's magnetic field.

How this data is unique?

- The 100-year data is unique also for its three sets of images, taken using different filters – White light, H-alpha and Calcium-K.
- It is known that the sun has a layered structure, and each of the data sets exposes a different layer.

White light

- Under white light filtering, the sun's photosphere and the sunspots are visible

Calcium-K

- The Calcium-K light can show layers some 2,000 km above this, in the chromosphere.
- Features called "filaments" which are related to large expulsions of material from the sun's surface can be viewed in the Calcium-K sets.

H-alpha

- The H-alpha images show up layers a little above the Calcium-K images.

Kodai observatory

- While 'spectroheliograms' were taken at the Kodai observatory since 1902, it was in 1909 that the data was used to discover the Evershed effect – that gases in sunspots flowed radially outwards.
- The discovery by John Evershed put the KSO at par with the best observatories in the world. But its importance eventually declined as it was not upgraded or maintained.

Indian Institute of Astrophysics (IIA)

- IIA is a premier institute devoted to research in astronomy, astrophysics and related physics.
- Funded by the Department of Science and Technology, the Institute ranks as a premier institution devoted to research and education of astronomy and physics in the country.
- It traces its origins back to an observatory set up in 1786 at Madras which from the year 1792 began to formally function at its Nungambakkam premises as the Madras Observatory.
- In 1899, the observatory moved to Kodaikanal.

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11. ECOLOGY

11.1   Three new sites recognised as biodiversity hotspots in Goa

- BirdLife International, a conservation organisation, has recognised three new sites in Goa as hotspots for protection.
- The sites have been added to their list of "Important Bird and Biodiversity Areas".

Previous four

- Earlier, Goa had four recognised biodiversity areas:
    1. Bhagwan Mahavir Wildlife Sanctuary and Mollem National Park,
    2. Carambolim Wetlands,
    3. Cotigao Wildlife Sanctuary and
    4. Mhadei Wildlife Sanctuary.

Latest three

- The list has now added three biodiversity areas
    1. Bondla Wildlife Sanctuary,
    2. Navelim Wetlands and
    3. Netravali Wildlife Sanctuary.

What if a site is declared an Important Bird and Biodiversity Area?

- Declaring a site as an Important Bird and Biodiversity Area does not ensure that the site gets legal protection or becomes inaccessible to people.
- Instead BirdLife International encourages national and State governments to recognise the areas as sites of vital importance for conservation of wildlife and to empower local community-based conservation initiatives.
- Goa probably has more sites than the seven identified but a lack of systematic effort in the past to document birds created a void of data because of which conservationist could not propose more sites to BNHS, which coordinates the programme in India.

11.2   Rhododendrons of eastern Himalayas under threat

- Though home to 97% of the Rhododendron species and sub-species in the country, indiscriminate felling and loss of habitat in the north-eastern States has left many of these beautiful flowering plants vulnerable to extinction.
- A recent publication by scientists with the Botanical Survey of India has documented and stressed the need to protect the many unique varieties of Rhododendron.

Rhododendron

- Rhododendron — literally rose tree in Greek — found in the region, with 18 species endemic to India.

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- Found in varied habitats from subtropical forest to alpine shrubs, rhododendrons range from dwarf shrubs to large trees.
- There are 132 taxa (80 species, 25 sub species and 27 varieties) of Rhododendron found in India, of which 129 are found in the north-eastern India alone.
- Only three taxa — **Rhododendron arboretum nilagiricum** found in south India and **Rhododendron colletianum** and **Rhododendron rawatti** from the western Himalayas are not found in the north-east.
- **Arunachal Pradesh is home to the highest number** with 119 taxa (74 species, 21 sub species and 24 varieties) of the Rhododendron.
- The small State of Sikkim is home to 42 taxa (25 species, 11 sub-species and six varieties) while 10 taxa are found in Manipur, four in Mizoram and 11 in Nagaland.
- The eastern Himalayas are regarded as one of the centres of diversity for the genus, which means that the Rhododendron has migrated to different parts of world from this region.
- The Sikkim Forest department and the Sikkim Rhododendron Society have identified nine Rhododedron ecosystems and protected area networks in the State. The two famous Rhododendron sanctuaries in the State are **Barsey Rhododendron Sanctuary** and **Shingba Rhododendron Sanctuary.**

Geographical conditions for the growth of Rhododendron

- The cold, moist slopes and deep valleys of the eastern Himalayas form a conducive habitat for the luxuriant growth of Rhododendron species.
- Nowhere in the world, are such unique geographical and ecological formations are found. This is the primary reason for such a diversity of Rhododendron available in the region.

Use of Rhododendron:

- Other than the ornamental value, use in packaging wood crafts, fragrance and religious use, Rhododendrons also are used in local medicines against colds, coughs and chronic bronchitis and diarrhoea.
- The petals of R. arboretum are widely used for making juice, jams and jelly.

Environmental concerns

- The scientists have pointed to the need for conservation of Rhododendrons.
- Epiphytic species, which grow on other trees or plants, of rhododendrons with limited population are most vulnerable due to loss of the host trees.
- While in high altitude areas of Arunachal Pradesh, rhododendrons are routinely cut for firewood by local people, forest fires in the dry seasons in Manipur and Nagaland were threatening the survival of many species.
- The endemic R. wattii from Dzukou hills of Manipur and Nagaland is one of the most critically endangered species in India, with only a few adult trees remaining in their natural habitat.

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11.3   Rescue wards for injured animals

- In an attempt to reduce the number of deaths of endangered wildlife in Thar desert, new "rescue wards" have come up in the far-flung rural areas of Jodhpur, Rajasthan.
- These will provide quick treatment to animals injured in road accidents, dog bites, etc.
- With an average of nearly 1,000 injuries a year, the wildlife in Thar desert has witnessed 60% mortality because of lack of transport to the main rescue centre at the Jodhpur zoo. This has led to the depletion of wildlife, mainly chinkaras (Indian gazelles).

11.4   Orangutans

- Albino orangutan is in news as the public are being asked to name a rare albino orangutan rescued in the Indonesian part of Borneo island, with conservationists saying she has become an "ambassador" for the threatened species.
- Orangutans are the two exclusively Asian species of extant great apes. Native to Indonesia and Malaysia, orangutans are currently found in only the rainforests of Borneo and Sumatra.
- Both orangutan species are considered to be "critically endangered", with the Sumatran orangutan being critically endangered since 2008.
- Orangutans are among the most intelligent primates; they use a variety of sophisticated tools and construct elaborate sleeping nests each night from branches and foliage.

11.5   Marine reserves can mitigate climate change

- Evaluating 145 peer-reviewed studies, a research team has concluded that "highly protected" marine reserves can help mitigate the effects of climate change.

Importance of marine reserves in climate change mitigation

- As per the research, marine reserves cannot halt or completely offset the growing impacts of climate change. But they can make marine ecosystems more resilient to changes and, in some cases, help slow down the rate of climate change.
- Protecting a portion of oceans and coastal wetlands will help sequester carbon, limit the consequences of poor management, protect habitats and biodiversity that are key to healthy oceans of the future, and buffer coastal populations from extreme events.
- Coastal wetlands, including mangroves, seagrasses and salt marshes have demonstrated a capacity for reducing local carbon dioxide concentrations because many contain plants with high rates of photosynthesis.

Concerns

- Around the world, coastal nations have committed to protecting 10% of their waters by 2020, but so far, only 3.5% of the ocean has been set aside for protection, and 1.6%, or less than half of that, is strongly protected from exploitation.

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- The study also notes that ocean surface waters have become on average 26% more acidic since pre-industrial times. By the year 2100, under a "business-as-usual" scenario, they will be 150% more acidic.

11.6 Industries found illegally dumping e-waste near Ramganga River to pay Rs 1 lakh

- The National Green Tribunal announced that anyone found dumping electronic waste (e-waste) on the banks of Ramganga River in Moradabad, Uttar Pradesh would be fined a sum of Rs one lakh as environment compensation.
- It is due to huge quantity of hazardous e-waste generated from various industries in powder form was being disposed on the bank of the river and the same was duly verified by a joint inspection conducted by Central Pollution Control Board (CPCB).
- Ramganga is a tributary of Ganga, which originates from the high-altitude zone of 800m to 900 m.
- It **passes through Corbett National Park**, near Ramnagar in Nainital district and descends to the plains.
- The cities alongside the banks of Ramganga River are Moradabad, Bareilly, Badaun, Shahjahanpur and Hardoi of Uttar Pradesh state.
- **The entire river flows in Uttarakhand and Uttar Pradesh states.**

The important tributaries of Ramganga are Kho, Gangan, Aril, Kosi and Deoha also known as Gorra.

11.7 Entire Assam declared 'disturbed'

- The government has declared the entire Assam as a "disturbed" area under the Armed Forces (Special Powers) Act for another 3 months.
- As per the notification, the entire Assam besides bordering areas of Meghalaya has been declared as "Disturbed Areas".
- In addition, the government has placed three districts of Arunachal Pradesh, namely, Tirap, Changlang and Longding and other areas falling under 16 police stations bordering Assam as "disturbed" area under the AFSPA.
- Assam was placed under AFSPA in November 1990.
- The AFSPA has been under force in the three Arunachal Pradesh districts since January 2016.

Why?

- The decision was taken after the government observed various violent activities carried out by certain insurgent groups like ULFA, NDFB and others in these areas.
- In Assam, 75 incidents of violence were reported in 2016 and 9 in 2017.

AFSPA:

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- Armed Forces (Special Powers) Act (AFSPA), is an Act of the Parliament of India that grant special powers to the Indian Armed Forces in what each act terms "disturbed areas".

Why is this required?

- The government (either the state or centre) considers those areas to be 'disturbed' "by reason of differences or disputes between members of different religious, racial, language or regional groups or castes or communities."

Under which conditions AFSPA can be declared?

- When the local administration fails to deal with local issues and the police proves inefficient to cope with them.
- When the scale of unrest or instability in the state is too large for the police to handle.

How does one officially declare a region to be 'disturbed'?

- Section (3) of the AFSPA Act empowers the governor of the state or Union territory to issue an official notification on The Gazette of India, following which the centre has the authority to send in armed forces for civilian aid.
- It is still unclear whether the governor has to prompt the centre to send in the army or whether the centre on its own sends in troops.
- Once declared 'disturbed', the region has to maintain status quo for a minimum of three months, according to The Disturbed Areas (Special Courts) Act, 1976.

What about the state government's role?

The state governments can suggest whether the Act is required to be enforced or not. But under Section (3) of the Act, their opinion can still be overruled by the governor or the centre.

11.8   Quality of water has improved

- The World Water Council recently carried out a major survey on water awareness in major parts of the world, including India.
- The survey was done ahead of the 8th World Water Forum that is scheduled to take place in the Brazilian capital Brasilia in March 2018.
- Based on its observations, the council has observed that the standard of drinking water in India has improved in the last five years but a lot of work still remains to be done.

Highlights of the survey

- More than one-third of Indians think that not enough is being done to achieve the UN's sustainable development goals to make water and sanitation for all a reality by 2030.
- 31% of Indians said they had been in a situation where it was unsafe to drink water but they had no other choice and suffered from diseases like diarrhoea and gastroenteritis.
- A majority (71%) of Indians said that safe drinking water had improved over the last five years.
- 62% of the Indians said they believed that the government was doing enough to support access to safe drinking water.

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- Referring to the 'Swachh Bharat Campaign', the World Water Council praised Indian government's efforts towards clean drinking water and sanitation.

World Water Council

- It is an international multi-stakeholder platform to facilitate the efficient conservation, protection, development, planning, management and use of water in all its dimensions.
- It was established in 1996 and its headquarters is in Marseille, France.
- It has 341 members which include organizations from the UN and intergovernmental organizations, the private sector, governments and ministries, academic institutions, international organizations, local governments, and civil society groups.
- Every third year the World Water Council organizes the World Water Forum in close collaboration with the authorities of the hosting country.
- The Forum is the largest international event in the field of water. The World Water Council is financed primarily through membership fees, and additional support is provided by the host City of Marseille. Specific projects and programs are financed through donations and grants from governments, international organizations, and NGO's.

11.9   Ganga Swachhta Sankalp Divas

- Ganga Swachhta Sankalp Divas was observed on 2 May 2017 by the National Mission on Clean Ganga (NMCG) at 12 locations including Allahabad, Varanasi, Kanpur, Patna, Sahibganj, Bhagalpur, Raj Ghat (Hardoi), Kolkatta, Srinagar (Uttarakhand), Bithoor, Devprayag and Vidhur Kuti.
- Over thirty more locations observed the day through the support of local NGOs, Ganga Vichaar Manch and volunteers.
- The main aim of celebrating the day is to spread awareness and encourage the public to actively involve themselves in the river's rejuvenation process through the Ganga Swachhta Sankalp that reiterates their commitment to Swachh Ganga through a series of events like Swachhta Sandesh rally, Shram Daan and plantation.
- The day also aims to stir a sense of pride and ownership among citizens to rouse support for Namami Gange programme.

11.10 Final raising of Sardar Sarovar Dam cleared by Narmada Control Authority

- Narmada Control Authority (NCA) has cleared the proposal of final raising of the Sardar Sarovar Dam (SSD) in Gujarat by lowering of the gates and impounding of water in the reservoir up to its Full Reservoir Level (FRL) of EL 138.68 meters.

Effects of lowering the Gates of SSD

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- With lowering of gates of SSD, the live storage capacity would increase from 1565 to 5740 MCM i.e. by 4175 MCM (267%).
- The clean (hydro-power generation) would increase by present 1300 MW to 1450 MW with increase in annual generation by about 1100 Million Units (i.e. about Rs.400/- crore per annum).
- In addition, this additional storage would irrigate about 8 lakh hectares. Additionally, about one crore population would get assured drinking water.

Narmada Control Authority

- The Narmada Control Authority (NCA) has been setup under the final orders and decision of the Narmada Water Disputes Tribunal (NWDT) as a machinery for implementation of its directions and decision.
- The authority started functioning from 20th December, 1980.

NARMADA PLAN TO COST ₹90K CR

The Centre's approval will allow Gujarat to raise the height of the dam from existing 121.92 metres to 138.72 metres

PROJECT IN STATS

5,860 million cubic feet live storage capacity of reservoir

1,450 MW hydropower installed power generation capacity

➤ Irrigation water to 1.8 million hectares, to benefit one million farmers

➤ Drinking water for 9,633 villages & 131 towns | 75,000 km canal network

COST | The project's **first cost estimate** was around ₹650cr, which was **revised to ₹6,406cr in 1986-87**. As on March 31, 2014, the **state govt has spent whopping ₹65,369cr** – the final figure likely to be over ₹ 90,000cr at completion

WHO GETS WHAT Fig in %		
STATE	**WATER**	**POWER**
MP	65.18	57
Guj	32.14	16
Raj	1.79	—
Maha	0.89	27

- The authority is a body corporate with representatives of the four States of Madhya Pradesh, Gujarat, Maharashtra, Rajasthan and representatives of Govt. Of India.
- The authority is funded in equal proportions by all the four states.
- Secretary (Water Resources), Govt. of India is the ex-officio Chairman of the Authority, whereas the routine administration is the responsibility of Executive Member of the Authority.
- NCA presently has six subgroups. The Narmada Control Authority has its headquarters at Indore.

Sardar Sarovar Project

- The Sardar Sarovar Project is one of the largest water resources project of India covering **four major states – Maharashtra, Madhya Pradesh, Gujarat and Rajasthan.**
- The Sardar Sarovar Dam is a gravity dam on the Narmada river near Navagam, Gujarat in India.
- It is the largest dam and part of the Narmada Valley Project, a large hydraulic engineering project involving the construction of a series of large irrigation and hydroelectric multi-purpose dams on the Narmada river.
- The project took form in 1979 as part of a development scheme to increase irrigation and produce hydroelectricity.
- Dam's spillway discharging capacity (30.7 lakhs cusecs) would be third highest in the world.
- The dam will be the third highest concrete dam (163 meters) in India, the first two being Bhakra (226 metres) in Himachal Pradesh and Lakhwar (192 meters) in Uttar Pradesh.

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11.11   Chinnar wildlife sanctuary

- Chinnar Wildlife Sanctuary (CWS) is located in the Idukki district of Kerala.
- It was in news as an ambitious project of the Kerala Forest Department at the Chinnar Wildlife Sanctuary (CWS) to rehabilitate Indian star tortoises (Geochelone elegans) seized from smugglers has turned into a major success. This makes the CWS the only rehabilitation centre for star tortoises in the country.
- The CWS is one of twelve wildlife sanctuaries among the protected areas of Kerala.
- It is under the jurisdiction of and contiguous with Eravikulam National Park to the south.
- Indira Gandhi Wildlife Sanctuary is to the north and Kodaikanal Wildlife Sanctuary is to the east.
- It forms an integral part of the protected forests straddling the Kerala-Tamil Nadu border in the Annamalai Hills.
- The Western Ghats, Anamalai Sub-Cluster, including all of Chinnar Wildlife Sanctuary, is under consideration by the UNESCO World Heritage Committee for selection as a World Heritage Site.
- The CWS is the only place in Kerala where star tortoises are known to occur in the wild. The sanctuary is now a haven for at least 450 such tortoises seized from poachers in less than two years.
- Indian star tortoises are considered auspicious for gaining wealth. It is the reason why Indian star tortoises, which are protected under the Wildlife Act, are poached and smuggled. It is classified as vulnerable by the IUCN.

11.12   Centre to tap MGNREGA funds to make Saraswati flow again

- The Centre plans to tap rural employment guarantee funds to recharge remnants of ancient rivers — including the mythical Saraswati — in a bid to boost groundwater reserves.
- Reviving such palaeo-channels may not be useful for irrigation but it could improve groundwater storage.
- Palaeo-channels are old rivers that have dried up and filled with sediment.
- Last October, a committee of hydrologists, geologists and archaeologists — as part of study commissioned by the Water Resources Ministry — reported evidence on the course of the Saraswati, mentioned in the Rigveda and Hindu mythology.
- S. Valdiya, who led the team, concluded that the Sutlej river "represented the western branch of the Saraswati."

Saraswati

- Saraswati river passed through Haryana, Rajasthan and North Gujarat. It also passed through Pakistan before meeting Western Sea through Rann of Kutch and was approximately 4,000 km in length.

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- One-third of the river stretch fell in present-day Pakistan. The longer, two-third stretch measuring nearly 3000 km in length fell in India.
- The river had two branches: western and eastern. The Himalayan-born Satluj "of the PAST", which flowed through the channels of present-day Ghaggar-Patialiwali rivulets, represents the western branch of the ancient river.
- On the other hand, Markanda and Sarsuti represented the western branch of Saraswati, known as Tons-Yamuna.
- The confluence of the branches was near Shatrana, 25 km south of Patiala. And suddenly, it flows crossing the dessert (Rann of Kutch) and meet gulf of western sea.

11.13 Climate change may cause more rainfall in tropical areas: NASA

- A new NASA study warns that the amount of rainfall in the Earth's tropical regions will significantly increase as our planet continues to warm.
- The team used observations of thermal radiation from NASA's spaceborne **Clouds and the Earth's Radiant Energy System** and other satellite devices as well as ground-level observations.

Highlights of the study

- Most global climate models underestimate decreases in high clouds over the tropics seen in recent NASA observations.
- Globally, rainfall is not related just to the clouds that are available to make rain but also to the Earth's "energy budget" — incoming energy from the Sun compared to outgoing heat energy.
- High-altitude tropical clouds trap heat in the atmosphere. If there are fewer of these clouds in the future, the tropical atmosphere will cool.
- Judging from observed changes in clouds over recent decades, it appears that the atmosphere would create fewer high clouds in response to surface warming. It would increase tropical rainfall, which would warm the air to balance the cooling from high cloud shrinkage.

Rainfall warming the air sounds counterintuitive

- People are used to rain cooling the air around them, not warming it. However, several kilometres up in the atmosphere, a different process prevails.
- When water evaporates into water vapour on the Earth's surface and rises into the atmosphere, it carries with it the heat energy that made it evaporate.
- In the cold upper atmosphere, when the water vapour condenses into liquid droplets or ice particles, it releases its heat and warms the atmosphere.
- It puts the decrease in high tropical cloud cover in context as one result of a planet-wide shift in large-scale air flows that is occurring as the Earth's surface temperature warms.

Clouds and the Earth's Radiant Energy System (CERES)

- CERES is on-going NASA climatological experiment from Earth orbit. It is a part of the NASA's Earth Observing System (EOS).
- The CERES are scientific satellite instruments.
- It is designed to measure both solar-reflected and Earth-emitted radiation from the top of the atmosphere (TOA) to the Earth's surface.
- Results from the CERES and other NASA missions, such as the Earth Radiation Budget Experiment (ERBE), could lead to a better understanding of the role of clouds and the energy cycle in global climate change.