

November 2018

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## **MAHARASHTRA REFORMS THE APMC ACT**

With this Maharashtra has become second state after Bihar that amended the APMC ACT comprehensively in 2006.

The Maharashtra government has promulgated an ordinance deregulating all agricultural produce from the APMC Act. This means farmers can now sell all agri-commodities outside regulated APMC markets in the state.

The changes have been made in accordance with the Centre's Model Agricultural Produce and Livestock Market Act 2017, he said adding that the scope of the Act in the state has been widened to include promotion and facilitation instead of regulation.

Some of the other measures also include establishing markets of national importance (MNI). At present, Asia's largest agri market Azadpur Mandi, Delhi is the only Market of National Importance (MNI) in the country. Now Maharashtra has taken the lead to frame a policy to encourage and grant the status of Markets of National Importance to some of the Agriculture Produce Market Committees (APMCs) in the state.

The move aims to strengthen the agricultural marketing system in the state and encourage export and trading among states. If any APMC receives more than 30 % arrivals of the total from two other states then that committee would be declared as APMC of national importance.

This means that markets such as Mumbai, Pune, Nashik and Nagpur APMC's may fit into this criterion. Therefore instead of a elected body on the APMCs which is the current case, in such markets a nominated board would come into existence.

## **EASE OF DOING BUSINESS INDEX 2018**

India's ranking in the World Bank's – Ease of Doing Business Index 2018, has made a giant leap of 30 positions – from 130th in 2016 to the 100 th spot in 2017. This jump can be attributed to major improvement in significant parameters such as starting a business, dealing with construction permits, resolving insolvency, getting electricity and getting credit, among other parameters.

The World Bank's 'Doing Business 2018 — Reforming to Create Jobs' report ranks 190 countries based on a combined score on 10 parameters. According to the report, India features among the top 10 countries that have shown a marked improvement this year in six out of 10 'Doing Business' indicators. This comes as a positive news after 2016, when India moved up only by a single position from 131 to 130. Additionally, India's combined or Distance-to- Frontier (DTF) score also witnessed a spike - from 56.05 in the previous year to 60.76 now, which reflects the country has improved in absolute terms as well.

## **INDIA AS “THE TARIFF KING”**

US President Donald Trump described India as “the tariff king”, accusing it of imposing “tremendously high” tariffs on American products.

While the recent tariff hikes may have been occasioned by the burgeoning current account deficit and the fall in the rupee, they only reinforce a growing trend of protectionism in Asia's third largest economy. While import tariffs may provide the economy with short-term relief, left uncorrected, the country's lurch toward protectionism could extract a steep price in the years to come.

In order to compare the rate of protection across countries, we use the “effective average tariff rate” here instead of a simple average of tariffs.

Among members of the BRICS grouping—Brazil, Russia, India, China, South Africa—India has the highest effective tariff rates on food items, automobiles and industrial inputs. In consumer goods and capital goods, Brazil has the highest effective tariff rates. The lack of clarity in information on tariffs at a product level in India adds a further layer of protection, according to some scholars.

Data from the Global Trade Alert (GTA) database, which attempts to record all trade-related measures by public authorities, and not just tariffs, shows that India and the US have introduced the most trade restrictions so far in 2018.

No wonder then that it was not just Trump who was complaining about India's trade policies. A recent World Bank report accused India of increasingly resorting to trade remedy measures such as anti-dumping and safeguard actions. According to the report, between 2011 and 2015, India initiated around 10% of global anti-dumping investigations and 17% of new safeguard investigations.

The lurch toward protectionism is especially worrying because it threatens to undo more than two decades of trade liberalization measures that have powered India's growth over the past quarter century, boosting incomes and helping cut poverty levels.

### **CORE SECTORS OF ECONOMY**

Core Industries are those industries whose products are essential for the economy and for other industries as well.

1. Cement
2. Coal
3. Electricity
4. Crude oil
5. Refinery products
6. Fertilizers
7. Steel
8. Natural gas

### **THE INDEX OF INDUSTRIAL PRODUCTION (IIP)**

The Index of Industrial Production (IIP) is an index for India which details out the growth of various sectors in an economy such as mineral mining, electricity and manufacturing. The all India IIP is a composite indicator that measures the short-term changes in the volume of production of a basket of industrial products during a given period with respect to that in a chosen base period. It is compiled and published monthly by the central statistical organisation (CSO), Ministry of Statistics and Programme Implementation six weeks after the reference month ends.

The level of the Index of Industrial Production (IIP) is an abstract number, the magnitude of which represents the status of production in the industrial sector for a given period of time as compared to a reference period of time.

The base year was at one time fixed at 1993–94 so that year was assigned an index level of 100. The current base year is 2011-2012.

The Eight Core Industries comprise nearly 40.27% of the weight of items included in the Index of Industrial Production (IIP). These are Electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilisers.

### **CREDIT RATING AGENCIES IN INDIA**

Credit Rating Agencies (CRA) assess creditworthiness of organisation and different entities. In simple words, these agencies analyse a debtor's ability to repay the debt and also rate their credit risk. All the credit rating agencies in India are regulated by SEBI (Credit Rating Agencies) Regulations, 1999 of the

Securities and Exchange Board of India Act, 1992.

There are a total of six credit agencies in India viz, CRISIL, CARE, ICRA, SMREA, Brickwork Rating, and India Rating and Research Pvt. Ltd.

Credit rating agencies assign ratings to an organization or an entity. The entities that are rated by credit rating agencies comprise companies, state governments, non-profit organisations, countries, securities, special purpose entities, and local governmental bodies. Credit rating agencies take into consideration several factors like the financial statements, level and type of debt, lending and borrowing history, ability to repay the debt, and the past debts of the entity before rating their credit. Once a credit rating agency rates the entities, it provides additional inputs to the investor following which the investor analyses and takes a sound investment decision. Poor credit rating indicates that the entity is at a high risk of defaulting. The credit ratings that are given to the entities serve as a benchmark for financial market regulations.

### **NASA RETIRES KEPLER SPACE TELESCOPE**

After nine years in deep space collecting data that indicate our sky to be filled with billions of hidden planets – more planets even than stars – NASA's Kepler space telescope has run out of fuel needed for further science operations. NASA has decided to retire the spacecraft within its current, safe orbit, away from Earth on 30th October, 2018. Kepler leaves a legacy of more than 2,600 planet discoveries from outside our solar system, many of which could be promising places for life.

Kepler has opened our eyes to the diversity of planets that exist in our galaxy. The most recent analysis of Kepler's discoveries concludes that 20 to 50 percent of the stars visible in the night sky are likely to have small,

possibly rocky, planets similar in size to Earth, and located within the habitable zone of their parent stars. That means they're located at distances from their parent stars where liquid water – a vital ingredient to life as we know it – might pool on the planet surface.

Launched on March 6, 2009, the Kepler space telescope combined cutting-edge techniques in measuring stellar brightness with the largest digital camera outfitted for outer space observations at that time. Originally positioned to stare continuously at 150,000 stars in one star-studded patch of the sky in the constellation Cygnus, Kepler took the first survey of planets in our galaxy and became the agency's first mission to detect Earth-size planets in the habitable zones of their stars.

### **STATUE OF UNITY**

The Statue of Unity is a colossal statue of Indian statesman and independence activist Sardar Vallabhbhai Patel (1875–1950) in the state of Gujarat, India. It is the world's tallest statue with a height of 182 metres (597 ft). It is located on a river island facing the Sardar Sarovar Dam on the river Narmada in Kevadiya colony, 100 kilometres (62 mi) southeast of the city of Vadodara.

The Statue of Unity is the world's tallest statue at 182 metres (597 ft). It rises 54 metres (177 ft) higher than the previous record holder, the Spring Temple Buddha in China's Henan province. Within India, the record was earlier held by the 41 m (135 ft) statue of Hanuman at the Paritala Anjaneya Temple near Vijayawada in the state of Andhra Pradesh. The statue can be seen within a 7 km (4.3 mi) radius.

The monument is constructed on a river island named Sadhu Bet, 3.2 km (2.0 mi) away from and facing the Narmada Dam downstream. The statue and its surroundings occupy more than 2 hectares (4.9 acres), and are

surrounded by a 12 km (7.5 mi) long artificial lake formed by the Garudeshwar weir downstream on the Narmada river.

### **DELHI TB SUMMIT: WHO**

New Delhi, 14 March 2018: Tracking progress to eliminate tuberculosis, Member countries of WHO South-East Asia Region today committed to further intensifying efforts to ensure rapid and concrete progress to End TB by 2030.

In a statement adopted at the Delhi End TB Summit here, member countries unanimously agreed to actualizing and intensifying essential actions agreed to in *the Delhi Call to Action which was adopted in March 2017* to accelerate efforts to End TB in the Region, host to one fourth of the global population but a disproportionate 46% of the global TB burden.

The Member countries of the Region stressed their firm intent to collectively reach out to 2 million missing TB cases and 150 000 multidrug-resistance cases by 2020 and implement a response that is demonstrably adequate for ending TB.

They also committed to universal access to comprehensive, integrated TB care and prevention services, to achieve universal health coverage as committed to in the Sustainable Development Goals, by enabling the best possible care to each and every person, including migrants, the aged and other high-risk populations, living with any form of TB including drug-resistant TB and TB-HIV co-infections.

### **ASIA BIBI TO LEAVE PAKISTAN**

Pakistan Christians pray for Asia Bibi, a Asia Bibi, the Pakistani Christian woman acquitted of blasphemy charges on Wednesday, plans to leave the country, her family said on Thursday, as radical Islamists mounted rallies for a second day against the verdict, blocking roads

and burning tyres in protest. The developments followed a landmark move by Pakistan's Supreme Court that overturned the 2010 conviction against her.

### **US-MEXICO BORDER WALL**

The border separating Mexico and the United States is the most frequently crossed international boundary in the world, with approximately 350 million legal crossings taking place annually. There are 48 U.S.–Mexico border crossings, with 330 ports of entry. At these points of entry, people trying to get into the U.S. are required to open their bags for inspection. Border crossings take place by roads, pedestrian walkways, railroads and ferries. From west to east, below is a list of the border city "twinning"; cross-border municipalities connected by one or more legal border crossings.

In 2016, Donald Trump, then the Republican presidential nominee in the then forthcoming U.S. election repeatedly stated that he wanted to build a wall along the border, for the purpose of immigration control. He declared that Mexico would be forced to pay for the entire wall. Following his Inauguration on January 20, 2017, on January 25 President Trump signed Executive Order 13767 to enable the building of the wall. Shortly afterwards, the Mexican President stated that Mexico will not pay for the wall. Trump had planned to meet Mexican President Enrique Peña Nieto on January 27 in Washington, D.C. to discuss topics including border security. The meeting was cancelled by Peña Nieto, and shortly after, Trump announced that he intended to impose a 20% tariff on Mexican goods to effectively pay for the wall.

### **FATHER OF WEB SEES SPLIT OF WEB GIANTS**

Silicon Valley technology giants such as Facebook and Google have grown so dominant they may need to be broken up, unless challengers or changes in taste reduce their clout, the inventor of the World Wide Web told Reuters.

The digital revolution has spawned a handful of U.S.-based technology companies since the 1990s that now have a combined financial and cultural power greater than most sovereign states.

Tim Berners-Lee, a London-born computer scientist who invented the Web in 1989, said he was disappointed with the current state of the internet, following scandals over the abuse of personal data and the use of social media to spread hate.

### **US SUPREME COURT ON INDIAN POWER PLANT**

The U.S. Supreme Court on Wednesday appeared unlikely to revive a lawsuit by villagers in India seeking to hold a Washington-based international financial institution responsible for environmental damage they blame on a power plant it financed.

The justices heard an hour of arguments in an appeal by the villagers of a lower court ruling that the International Finance Corp was immune from such lawsuits under U.S. law. Based on questions asked by several justices, the court looks likely to rule in favor of the IFC, which is part of the World Bank Group.

IFC provided \$450 million in loans in 2008 to help construct the coal-fired Tata Mundra Power Plant in Gujarat, India. IFC loans include provisions requiring that certain environmental standards are met.

### **₹1 LAKH-CRORE IN OCTOBER GST COLLECTION**

Goods and Services Tax (GST) collections crossed the psychological barrier of ₹1 lakh-crore in October, coming in at ₹1,00,710 crore, the government announced on Thursday. The collections in October 2018 were 20.8% higher than the ₹83,346 crore seen in October 2017.

### **PRIVATE MEMBER BILL ON RAM TEMPLE**

A private member's Bill urging the construction of a Ram temple in Ayodhya, by BJP MP Rakesh Sinha, is in the works, to be pushed for the winter session of Parliament.

Mr. Sinha, close to the RSS and author of a well-regarded biography of RSS founder K.B. Hedgewar, also declared, in a series of tweets, that he would be canvassing support for his Bill from Opposition leaders, including Congress president Rahul Gandhi.

### **PRIVATE MEMBER'S BILL**

A private member's bill in a parliamentary system of government is a bill (proposed law) introduced into a legislature by a legislator who is not acting on behalf of the executive branch. The designation "private member's bill" is used in most Westminster System jurisdictions, in which a "private member" is any member of parliament (MP) who is not a member of the cabinet (executive). Other labels may be used for the concept in other parliamentary systems.

In India, of the 300 odd Private Members' Bills introduced in the 14th Lok Sabha, barely 4% were discussed; 96% lapsed without even a single debate in the House. Till date, Parliament has passed 14 Private Members' Bills. Five of these were passed in 1956 alone and 47 years after passing 'The Supreme Court (Enlargement of Criminal Appellate Jurisdiction) Bill, 1968' that became an Act on 9 August 1970. Rajya Sabha has passed Rights of Transgender Persons Bill, 2014 on April 24, 2015, which is pending to be passed in Lok Sabha.



## **INDIA PROTESTS CHINA-PAKISTAN BUS VIA PoK**

India on Thursday reiterated its opposition to a proposed luxury bus service between Pakistan and China that would pass through parts of Pakistan-occupied Kashmir and Gilgit-Baltistan — territory that India claims — terming it “a violation of India’s sovereignty”, a day after it had summoned a Chinese diplomat to South Block to lodge a strong protest against the initiative.

“We have lodged strong protests with China and Pakistan on the proposed bus service that will operate through areas of Pakistan Occupied Jammu and Kashmir State under the so-called ‘China-Pakistan Economic Corridor,’” the spokesperson for the Ministry of External Affairs (MEA) told reporters. “Any such bus service through Pakistan Occupied Jammu & Kashmir State will be a violation of India’s sovereignty and territorial integrity.”

## **ROMANCE OF KURINJI**

For the rolling hills and the rocky slopes of Kodaikanal, 2018 has been significant for they came alive with the mass blossoming of the Kurunci (pronounced as Kurinji) flower. The flowering happens every 12 years, a phenomenon known as Plietesials. *Strobilanthes kunthiana* is endemic to the upper Palani High Ranges and to the upper ranges of the South Western Ghats.

Sangam literature has documented the Kurinji in its Agam or love poetry. From ancient times, the Kurinji flower became part of the religious beliefs, traditions and folklore. The terrain being presided over by “the red speared God of War, youth and beauty” – Murugan — Kurinji and the deity have become synonymous. Certain tribes of the hills believe that Lord Murugan married Valli (daughter of a tribal chieftain) by garlanding her with Kurinji flowers. So they do not touch the flowers when they are

in bloom, but wait till it withers, to use the wood as firewood. It is their way of conserving them.

## **PALAU TO BAN SUNSCREEN AS IT TRIES TO SAVE ITS CORAL REEFS**

ban sunscreen as it tries to save its coral reefs.

In an attempt to protect the coral reefs that divers so admire they have dubbed them the underwater Serengeti, the Pacific nation of Palau will soon ban many types of sunscreen. President Tommy Remengesau Jr. last week signed legislation that bans “reef-toxic” sunscreen from 2020. Banned sunscreens will be confiscated from tourists who carry them into the country, and merchants selling the banned products will be fined up to \$1,000.

Mr. Remengesau said in a statement that the penalties find the right balance between “educating tourists and scaring them away.” The law defines reef-toxic sunscreen as containing any one of 10 chemicals, including oxybenzone, and states that other chemicals may also be banned. Mr. Remengesau said a big impetus for the ban was a 2017 report which found that sunscreen products were widespread in Palau’s famed Jellyfish Lake, which was closed for more than a year due to declining jellyfish numbers before being recently reopened.

Palau, located east of the Philippines and north of Indonesia, is home to 21,000 people and has an economy that relies on tourism and fishing. It has a compact of free association with the U.S.

## **RETALIATORY TARIFFS PUT OFF**

India has, for the third time, postponed the implementation of higher tariffs on some goods imported from the U.S. to December 17, a government order said. Angered by U.S. refusal to exempt it from new steel and aluminium tariffs, India decided in June to raise

the import tax on some U.S. products, including almonds, walnuts and apples.

### **CHOKED BY SMOG: ON AIR POLLUTION**

The UN Environment Programme's recent report titled 'Air Pollution in Asia and the Pacific: Science-Based Solutions' has sounded a warning, pointing out that only 8% of the population in the countries of the region get to breathe air of acceptable quality. One study of degradation of Delhi's air over a 10-year period beginning 2000 estimated premature mortality to have risen by as much as 60%. With the steady growth in the population of the capital and other cities, the trauma is set to worsen. Farm stubble burning is a major contributor to the problem, and its footprint may be growing because of wider use of mechanical harvesters that is producing more waste. An innovative approach could be to use climate change funds to turn farm residues into a resource, using technological options such as converting them into biofuels and fertilizers. From an urban development perspective, large cities should reorient their investments to prioritise public transport, favouring electric mobility.

### **U.S. RESTORES IRAN SANCTIONS LIFTED UNDER OBAMA NUCLEAR DEAL**

In a statement issued on Friday night, Mr. Trump said, "Our objective is to force the regime into a clear choice- either abandon its destructive behavior or continue down the path toward economic disaster."

The Trump administration on Friday restored U.S. sanctions on Iran that had been lifted under the 2015 nuclear deal, but carved out exemptions for eight countries that can still import oil from the Islamic Republic without penalty.

The sanctions take effect Monday and cover Iran's shipping, financial and energy sectors. They are the second batch the administration has re-imposed since Mr. Trump withdrew from the landmark accord in May.

The 2015 deal, one of former President Barack Obama's biggest diplomatic achievements, gave Iran billions of dollars in sanctions relief in exchange for curbs on its nuclear program, which many believed it was using to develop atomic weapons. Mr. Trump repeatedly denounced the agreement as the "worst ever" negotiated by the United States and said it gave Iran too much in return for too little.

But proponents as well as the other parties to the deal Britain, China, France, Germany, Russia and the European Union have vehemently defended it. The Europeans have mounted a drive to save the agreement without the U.S., fearing that the new sanctions will drive Iran to pull out and resume all of its nuclear work.

### **INDIA, ZIMBABWE INK 6 AGREEMENTS AS VENKAIAH NAIDU MEETS PRESIDENT MNANGAGWA**

India and Zimbabwe on Saturday signed six signed agreements, including on mining, Information and communications technology (ICT), visa waiver and traditional medicine as Vice President Venkaiah Naidu met Zimbabwe President Emmerson Mnangagwa and his deputy Kembo Mohadi and held wide-ranging talks here.

Mr. Naidu arrived here on Friday night on the second leg of his six-day three-nation tour to Africa, which aims at deepening India's strategic cooperation with Botswana, Zimbabwe and Malawi.

### **PLASTIC WASTE MANAGEMENT RULES, 2016**

The Government has notified the Plastic Waste Management Rules, 2016, in suppression of the earlier Plastic Waste (Management and Handling) Rules, 2011. The Minister of State for Environment, Forest and Climate Change, Shri Prakash Javadekar, said that the minimum thickness of plastic carry bags has been increased from 40 microns to 50 microns. He stated that 15, 000 tonnes of plastic waste is generated every day, out of which 9, 000 tonnes is collected and processed, but 6, 000 tonnes of plastic waste is not being collected. Shri Javadekar also said that the rules, which were admissible upto municipal areas, have now been extended to all villages. The Minister said that notifying the new Plastic Waste Management Rules is a part of the revamping of all Waste Management Rules. This will help in achieving the vision of our Prime Minister of Swacchh Bharat and cleanliness is the essence of health and tourism, Shri Javadekar added. It also includes the Extended Producers Responsibility (EPR).

### **GSAT-11 RETURNS TO GUIANA FOR DECEMBER LAUNCH**

GSAT-11, the heaviest Indian communication satellite built to date, for faster Internet connectivity, is back once again at the Guiana Space Centre for an early December launch. It returns to the South American port for the second time in six months after it was taken back to Bengaluru in April for inspections.

K. Sivan, Chairman of the Indian Space Research Organisation (ISRO) and Secretary, Department of Space, confirmed on Wednesday that the 5,700 kg spacecraft was shipped out of Bengaluru last week and has reached the European launch port.

“GSAT-11 is already in Kourou. It was flown out last week. We are targeting December 4 for its launch,” Dr. Sivan said. Arianespace,

ISRO’s long-time European launch services contractor, has paired GSAT-11 with South Korea’s weather satellite GEO-Kompsat 2A. The two are slated to go to space on the same Ariane 5 launch vehicle, numbered VA246.

Arianespace's CEO Stephane Israel tweeted a pictorial welcome on October 29 local time as the satellite arrived at the port halfway across the globe by a special Russian Antonov cargo flight. GSAT-11 is built to provide the Indian region superior communication and 12 GBPS connectivity with its multiple spot beams in Ka and Ku bands.

### **ILLINOIS STATE BRACES ITSELF FOR ALL-INDIA CONGRESSIONAL RACE**

Of the about 500 Congressional and gubernatorial races this Tuesday, there is one of unique and special relevance to India. The 8th Congressional District in Illinois (IL-08) is witnessing a race in which two people of Indian origin — both first-generation immigrants — are competing against each other for a seat in the U.S. House of Representatives.

Democrat Raja Krishnamoorthi, the incumbent, a Harvard-educated lawyer and erstwhile businessman, goes up against Jitendra Diganvker, a businessman and Uber driver, running on the Republican ticket.

### **KA, KU AND HTS**

As more of the world migrates towards using wireless technology each day, optimal, high-speed, and reliable wireless connectivity has become the need of the hour. The advanced High Throughput Satellites (HTS) have been designed to take care of these requirements. HTS technology boasts an unprecedented bandwidth capability, and is widely viewed as the future of satellite communications. Typically for HTS systems, the Ku-band or the Ka-band

of the electromagnetic spectrum are used.

In recent years owing to the explosion in Internet based applications, the demands for higher satellite capacity has skyrocketed. The capacity of the lower Ku-band of the spectrum is falling short, and investments are now being made in the use of the Ka-band. These bands are not interchangeable, and each has its own advantages and disadvantages, which makes it suitable for one set of applications and unsuitable for another.

### **High Throughput Satellites (HTS)**

In the High Throughput Satellites system, the coverage area is divided into small regions known as spots. Each spot is then served by a spot beam. This is unlike the conventional system where one large beam is used to serve the entire area of coverage.

Each spot beam covers an area that is only about 1% to 2 % the size of the conventional beam. This allows these beams to provide high signal strength as well as gain. Thus overall performance is better than that of the conventional system.

Newer advanced technology also allows more accurate antennas to be built and thus the spots can be made smaller. This makes it possible to reuse frequencies multiple times, making HTS satellites more efficient.

### **Ku-band**

The Ku band refers to the band of electromagnetic frequencies in the range of 12-18 GHz. It is located directly below the K-band. This band is mainly used for fixed as well as broadcast satellite communication services. It is also used in specific applications such as in communications between space shuttle and the International Space Station (ISS), as well

as radar applications.

### **Ka-band**

The Ka-band of the electromagnetic spectrum comprises frequencies in the range of 26.5-40 GHz. This band is located directly above the K-band.

The frequencies in this band are used for close-range military radars, vehicle speed detection, and few other specific applications. NASA's Kepler mission utilizes frequencies in this band to down-link scientific data collected by the space telescope.

### **Ka-band Vs. Ku-band**

#### **Availability of Spectrum**

The C-band and Ku band of the electromagnetic spectrum have been around for a long time. As such, there are an extensive number of satellites and services which use frequencies in these bands.

Compared to this, the use of frequencies in the Ka-band has only recently started gathering steam. This fact, coupled with the frequency-reuse capability of the multiple spot beam technology of the HTS, increases the usable spectrum that is available.

#### **Coverage**

#### **Area**

The Ka-band satellites which are currently in orbit serve only specific and limited geographical regions. For example, the ViaSat-1 launched in 2011, only provides coverage to North America. Similarly, the KA-Sat launched in 2010 serves only Europe, the Mediterranean basin, and small regions in the Middle East.

Obviously, none of these are a viable option for ships or intercontinental airplanes, which need to traverse the non-covered oceanic zone. Also, due to the receding polar ice caps, in recent years, vessels have begun traversing the now navigable Northeast and Northwest passages. The current Ka-band satellites are incapable of providing coverage to them.

Ku-band satellites, on the other hand, are more in number and have a much wider coverage area in comparison to Ka-band satellites. Further, satellites communicating over the lower L-band, presently are a more viable option for most ocean-going vessels.

### **Interference**

The Ku-band satellites are often placed as little as two degrees apart from each other in the Earth's orbit. This increases the chances of adjacent satellite interference.

The Ka-band satellites are placed further apart from each other, and therefore, the chances of antennas transmitting to non-targeted satellites and interference between signals is much less.

### **Antenna**

### **Sizes**

The size of antenna is inversely proportional to the frequency band of the signal it transmits or receives. Hence, smaller-sized antennas can be used for the systems that operate on the Ka-band as compared to the ones used for the Ku-band. Since the antenna sizes are smaller, their cost too would be lower. They should also be easier to install.

### **Rain**

### **Fade**

The frequencies in the Ka-band are nearly

double that of the frequencies in the Ku-band. Since wavelength is inversely proportional to frequency, the wavelengths of signals in the Ka-band are much smaller than those of the Ku-band. This makes them more susceptible to bad weather and other atmospheric disruptions.

Rains drops are known to absorb signals having frequency above 11 GHz. This effect is known as rain-fade. Snow and ice too absorb these high frequency signals. Both Ku-band and Ka-band signals suffer from rain fade; however, the fading is larger for Ka-band signals owing to their higher frequencies.

### **Backup**

Since there are a number of satellites currently in orbit which function on the Ku-band, there won't be a problem finding a backup satellite to maintain a continuous link in case the main satellite develops a fault.

However, in comparison, there are far fewer satellites that function in the Ka-band of the spectrum, and the ones that do, are often part of a closed network. So, in the event of failure, it will be very difficult to find a backup satellite to maintain the communication link.

### **PACIFIC ARCHIPELAGO VOTES ON INDEPENDENCE FROM FRANCE**

Observers expect a majority to favor remaining a part of France, based on opinion polls and previous election results. in New Caledonia are deciding whether the French territory in the South Pacific should break free from the European country that claimed it in the mid-19th century.

The polls opened on Sunday morning in a referendum that's a milestone in the process of the archipelago's three-decade-long decolonization one that will help define New

Caledonia's future as an independent country or as a continuing part of France. More than 174,000 registered voters are invited to answer the question- "Do you want New Caledonia to gain full sovereignty and become independent?"

### **INDIA, CHINA AMONG 8 COUNTRIES ALLOWED TO BUY IRANIAN OIL: MIKE POMPEO**

India is one of eight countries to receive temporary exemptions from U.S. sanctions on Iran that came into effect on Monday, Secretary of State Mike Pompeo has said.

Addressing a joint press briefing with Treasury Secretary Steven Mnuchin in Washington on Monday, Mr. Pompeo said, "We have decided to issue temporary allotments to a handful of countries, responsible to the specific circumstances and to ensure a well supplied oil market. The U.S. will be granting these exemptions to China, India, Italy, Greece, Japan, South Korea, Taiwan and Turkey. In the last fiscal year India, which imports over 80% of its oil, sourced some 10% of its oil imports, or just over 22 million tons from Iran. The Indian Oil Corporation is the biggest Indian customer for Iranian oil.

### **TIGRESS SUNDARI CAPTURED IN ODISHA'S SATKOSIA RESERVE**

The tigress will be kept in a special enclosure set up at Raiguda inside the reserve. After more than a fortnight of intense chase, experts on November 6 managed to tranquilise Sundari, the tigress brought from Madhya Pradesh as part of tiger reintroduction programme in Odisha's Satkosia Tiger Reserve. Sundari is said to have mauled two persons in villages inside the tiger reserve.

Subsequently, residents resorted to arson demanding the capture of the big cat.

### **'SAMOSA CAUCUS'**

None of the more than half a dozen new Indian-American candidates could make it to the House of Representatives. The so-called 'Samosa Caucus' - an informal group of the Indian-Americans in the US Congress - failed to increase its strength, even as its all four incumbent members were re-elected to the House of Representatives in the highly polarised midterm elections held Tuesday.

None of the more than half a dozen new Indian-American candidates, many of whom caught national attention by giving tough fight to their opponents and outraising them in the fund raisers, could make it to the House of Representatives, which is equivalent to Lok Sabha in the Indian parliament.

However, Indian-Americans picked up more seats in the State assemblies. The community sent its member Ram Villivalam for the first time to the Illinois Senate and also elected a Muslim Indian-American Mujtaba Mohammed to the North Carolina State Senate.

### **CHINA UNVEILS NEW 'HEAVENLY PALACE' SPACE STATION AS ISS DAYS NUMB**

China unveiled on November 6 a replica of its first permanently crewed space station, which would replace the international community's orbiting laboratory and symbolises the country's major ambitions beyond Earth.

The 17-metre (55-foot) core module was a star attraction at the biennial Airshow China in the southern coastal city of Zhuhai, the country's main aerospace industry exhibition. The model represented the living and working space of the Tiangong — or "Heavenly Palace" — which will also have two other modules for scientific

experiments and will be equipped with solar panels.

Three astronauts will be permanently stationed in the 60-tonne orbiting lab, which will enable the crew to conduct biological and microgravity research. Assembly is expected to be completed around 2022 and the station would have a lifespan of around 10 years.

The International Space Station — a collaboration between the United States, Russia, Canada, Europe and Japan — has been in operation since 1998 but is due to be retired in 2024.

China will then have the only space station in orbit, though it will be much smaller than the ISS which weighs 400 tonnes and is as large as a football pitch. The country announced in May that the lab would be open to "all countries" to conduct science experiments.

### **ASEAN MEMBER COUNTRIES OF RCEP OFFER INDIA CONCESSION**

India can open up 83% of its market against the earlier 92%. Several Asian member countries of the proposed Regional Comprehensive Economic Partnership (RCEP) have offered India a significant concession on the extent to which it needs to open up its markets, in a bid to encourage it to join the partnership quickly, according to a diplomat from Singapore.

The RCEP is a proposed trade agreement between the 10 Association of Southeast Asian Nations (ASEAN) countries and their six free trade agreement partners, namely Australia, China, India, Japan, Korea, and New Zealand. The grouping would comprise 25% of global GDP, 30% of global trade, 26% of FDI flows, and 45% of the population.

"The ASEAN countries are keen to have India as part of the partnership and have made India a concessional offer of opening up only about 83% of its market, as compared to the original 92% that the RCEP agreement stipulated," the Singaporean diplomat said on condition of anonymity

### **KAMALADEVI CHATTOPADHYAY**

Kamaladevi Chattopadhyay (3 April 1903 – 29 October 1988) was an Indian social reformer and freedom fighter. She was most remembered for her contribution to the Indian independence movement; for being the driving force behind the renaissance of Indian handicrafts, hand looms, and theater in independent India; and for upliftment of the socio-economic standard of Indian women by pioneering the co-operation.

In 1926, she met the suffragette Margaret E. Cousins, the founder of All India Women's Conference (AIWC), who inspired her to run for the Madras Provincial Legislative Assembly.

In the following year, she founded the All-India Women's Conference (AIWC) and became its first Organizing Secretary. In the following years, AIWC, grew up to become a national organisation of repute, with branches and voluntary programs run throughout the nation, and work steadfastly for legislative reforms. During her tenure, she travelled extensively to many European nations and was inspired to initiate several social reform and community welfare programs, and set up educational institutions, run for the woman, and by women. Another shining example in this series was the formation of Lady Irwin College for Home Sciences, one of its kind college for women of its times, in New Delhi. She was a prolific writer. Inner Recesses, Outer Spaces: Memoirs, 1986 was her last published book.

## **NASA'S PARKER SOLAR PROBE PROBE**

NASA's Parker Solar Probe – mankind's mission to touch the Sun – is alive and well after its first close encounter with our star's surface. The probe skimmed by the Sun at just 15 million miles from its surface, breaking the previous record was set by Helios B in 1976.

The manoeuvre exposed the spacecraft to intense heat and solar radiation in a complex solar wind environment, NASA said in a statement. "Parker Solar Probe was designed to take care of itself and its precious payload during this close approach, with no control from us on Earth — and now we know it succeeded," said Thomas Zurbuchen, associate administrator of NASA's Science Mission Directorate at the agency headquarters in Washington.

## **NOT IN DIRECT TALKS WITH TALIBAN: MEA**

No compulsion to participate, says Ministry after its turnaround raises queries. Facing a barrage of questions on its sudden shift in policy on attending talks with the Taliban, the Centre on Friday clarified that its delegation at the second 12-nation 'Moscow format meeting of consultations on Afghanistan' would not hold direct talks with the insurgent group there.

"We have said we will be taking part in a meeting on Afghanistan which is hosted by Russia; and we decided that our participation in the talks would be at the non-official level," the MEA's official spokesperson Raveesh Kumar told reporters. "But we didn't say anywhere that there will be talks with the Taliban."

The government said its policy on Afghanistan was "consistent", despite its decision to send two former diplomats, Amar Sinha and TCA Raghavan, to the talks. It would mark the first

time an Indian delegation would be at the table with a Taliban delegation from its political office in Doha.

## **INDIA APPRECIATES U.S. WAIVER ON NEW DELHI-TEHRAN ENERGY TRADE**

The Ministry of External Affairs (MEA) on Friday expressed appreciation for the United States' waiver on India-Iran energy trade and the Chabahar Port project. The spokesperson of the Ministry said the port will be of importance in helping the situation in Afghanistan, but reiterated that India will continue to import Iranian energy.

"India is a major importer of crude oil from Iran. This is very important for our own energy security needs. We appreciate the fact that the U.S. has shown understanding of our position and has said that its intention is not to hurt India," said Raveesh Kumar, spokesperson, Ministry of External Affairs, adding that India is studying the details of the exemption.

The formal response from India came days after U.S. Secretary of State Mike Pompeo declared a waiver for India and seven other countries on energy trade. Iraq has also received a waiver for the import of electricity from Tehran.

## **THE CREDIT STIMULUS FOR MSMES**

The Centre has announced an important credit stimulus package for micro, small, and medium enterprises (MSMEs). Prime Minister Narendra Modi has promised the sanction of business loans of up to ₹1 crore within a time frame of 59 minutes, in order to encourage faster credit flow to MSMEs. These companies will also receive an interest subvention of 2% under the scheme and support from public sector units, which will now be mandated to make at least 25% of their overall purchases from MSMEs. It is worth noting that MSMEs, account for 30% of India's gross domestic product (GDP).

Further, in the aftermath of the IL&FS crisis, which has affected the amount of lending done



by non-banking financial companies to the MSME sector, the government would be looking at the scheme as a tool to improve credit flow and the pace of job creation in the economy.

The scheme has signs of state-led economic planning written all over it. The biggest risk of a credit stimulus is the misallocation of productive economic resources. Pumping extra credit into MSMEs now may well lead to a temporary boom and enable a feel-good atmosphere in the run-up to elections, but it can lead to a painful bust when the stimulus ends some day. Conceptually, the Prime Minister's latest credit scheme is no different from the MUDRA loan scheme, which has been troubled by soaring bad loans.

### **WRESTLING: BAJARANG PUNIA IS WORLD NO. 1**

World championships silver medallist wrestler Bajrang Punia became the first Indian to secure the No. 1 slot in the World rankings issued on Saturday. According to the latest United World Wrestling (UWW) rankings, Punia is now the top-ranked wrestler in men's freestyle 65kg category.

### **'EU SHOULD PAY MORE FOR DEFENCE'**

Meeting for talks at the Elysee ahead of commemorations to mark the 100th anniversary of the end of the First World War, Mr. Macron welcomed Mr. Trump with a firm handshake, but there appeared to be less immediate warmth between them than in the past.

"We want to help Europe but it has to be fair. Right now the burden sharing has been largely on the United States." Mr. Macron echoed those sentiments, saying that he wanted Europe to bear a greater share of the defence costs within NATO, a point he has made repeatedly since taking

office, alongside calls for Europe to develop its own military capability.

Discussing the threat from cyberhacking and outside meddling in the electoral process, Mr. Macron said Europe needed to protect itself against China, Russia "and even the United States".

### **RUSSIA STEPS INTO AFGHAN PEACE EFFORTS**

The Taliban met with members of Afghanistan's High Peace Council on Friday in a conference organised by the Russian government in Moscow. This is the second such meeting with the insurgent group being organised by international stakeholders in a bid to push peace talks between the Taliban and the Afghan government.

The Taliban reportedly met with U.S. special envoy Zalmay Khalilzad last month, to start negotiations on the terms of a peace deal. Both meetings, however, did not see the participation of the Afghan government. "President (Ashraf) Ghani is committed to peace and has taken bold steps. However, the Taliban did not reciprocate," a source close to the Afghan President said on condition of anonymity. Mr. Ghani did make several efforts to get the Taliban on the negotiating table, including a three-day Id ceasefire last year

### **KHADA DUPATTA**

Over the past few days, a few billboards have popped up in the city skyline showing what appears like a slinky version of the khada dupatta, an integral part of the wardrobe of the erstwhile royalty and nobility in Hyderabad. Worn on the first day of an elaborate wedding in Hyderabad, the khada dupatta with

matching kurti choli was a sign that the girl is now a woman. "A Hyderabad bride is unimaginable without the khada dupatta.

### **THE HUKITOLA BUILDING**

A nameless 150-year-old building has been renovated and is set to feature prominently on Odisha's tourism map.

Buoyed by a high tide, and buffeted by a choppy sea, my boat from River Gobari takes me to the tiny, uninhabited island of Hukitola in the Bay of Bengal, off Odisha's coast, in just over an hour. As I hop off the boat, I see an enormous building standing out incongruously amid coconut trees: it is a stony, many-arched structure, with an odd triangular facade.

The 150-year-old building, which has remained untouched by erosion, has recently drawn the curiosity of heritage conservationists. The British, who chanced upon the island while looking for a place to post a harbour-master for the area, built the structure in 1865 as a warehouse to store grain. It played a critical role in supplying rice during the great 1866 famine, which wiped out a third of Odisha's population. A section of the building had a rainwater harvesting system to meet the drinking water needs of sailors.

### **GOLD NANOPARTICLES TARGET PROSTATE CANCER**

Scientists are using gold nanoparticles that act as tumour-seeking missiles to target prostate cancer, in a first-of-its-kind clinical trial. The nanoparticles, or nanoshells, are made of small layers of silica glass formed into a sphere and wrapped in a thin layer of gold.

The shells seek out and saturate cancerous cells, and their advanced

vibrational properties are then harnessed to cause the tumorous tissue to pulse with extreme temperature when light is applied through a laser specifically designed to excite the particles. The oscillation kills the cancer cells while preserving the healthy tissue, avoiding the nerves and urinary sphincter.

### **WORLD'S LARGEST BRAIN-LIKE SUPERCOMPUTER (SPINNAKER)**

The newly formed million-processor-core spiking neural network architecture (spinnaker) machine is capable of completing more than 200 million million actions per second, with each of its chips having 100 million transistors.

The spinnaker machine, designed and built in the university of manchester in the uk, can model more biological neurons in real time than any other machine on the planet.

Biological neurons are basic brain cells present in the nervous system that communicate primarily by emitting 'spikes' of pure electro-chemical energy. Neuromorphic computing uses large scale computer systems containing electronic circuits to mimic these spikes in a machine. spinnaker is unique because, unlike traditional computers, it does not communicate by sending large amounts of information from point a to b via a standard network.

Researchers eventually aim to model up to a billion biological neurons in real time and are now a step closer. to give an idea of scale, a mouse brain consists of around 100 million neurons and the human brain is 1,000 times bigger than that.

One billion neurons is one per cent of the scale of the human brain, which consists of just under 100 billion brain cells, or

neurons, which are all highly interconnected via approximately one quadrillion synapses.

It also has simulated a region of the brain called the basal ganglia - an area affected in parkinson's disease, meaning it has massive potential for neurological breakthroughs in science such as pharmaceutical testing.

### **SIMBEX**

The 25th edition of the India-Singapore bilateral naval exercise, SIMBEX, has begun at the tri-services command in Port Blair.

The exercise, which kicked off on Saturday off the Andaman Sea and the Bay of Bengal, will conclude on November 21.

"Started as basic Anti-Submarine Warfare (ASW) exercises in 1994, today these exercises have graduated to complex maritime combat drills, including missile and torpedo firings, and shore-based intensive professional exchanges," the Navy said in a statement.

### **CENTRE APPROVES RENAMING OF 25 PLACES IN PAST ONE YEAR**

The Centre has given consent to the renaming of at least 25 towns and villages across India in the past one year and among the pending proposals is one for the State of West Bengal, according to officials.

Allahabad and Faizabad are the latest additions to the growing list of places that have been renamed.

Several proposals, including the renaming of West Bengal as 'Bangla', are pending

with the Central government. The process is a long-drawn one with the involvement of multiple Central Ministries and departments.

The Union Home Ministry has given consent to the proposals of name change in 25 villages and towns in different parts of the country in last one year, a senior Ministry official told *PTI*.

The proposals to change the names of Allahabad to Prayagraj and Faizabad to Ayodhya are yet to be received by the Ministry from the Uttar Pradesh government, the official said.

Some of the approved name change proposals are: Rajahmundry as Rajamahendravaram in East Godavari district of Andhra Pradesh; Outer Wheeler as APJ Abdul Kalam Island, situated in Bhadrak district of Odisha; Arikkod as Areekode in Malappura district of Kerala; Pindari as Pandu-Pindara in Jind district of Haryana; and Samphur as Sanphure in Kiphire district of Nagaland.

The Home Ministry gives its consent to the change of name of any place after taking no-objections from the Ministry of Railways, Department of Posts and Survey of India.

The name of any State changed last time was in 2011, when Orissa became Odisha. Names of Bombay was changed to Mumbai in 1995, Madras to Chennai in 1996, Calcutta to Kolkata in 2001.

### **ISRO 's MISSION VENUS**

An 18-month-old pitch for what could be the first Indian orbiter mission to Venus has just been refreshed and relaunched, opening it up now for international

experiments. Tentatively marking the yet to be named 'Mission Venus' for mid-2023, the Indian Space Research Organisation (ISRO) plans to study the planet from an elliptical orbit that is closest to Venus at 500 km and 60,000 km at the farthest end — similar to its Mars Orbiter Mission (MOM) of 2013.

### **'DISGUISED UNEMPLOYMENT'**

Also known as hidden unemployment, this refers to a situation where labour that is employed in a job is not actually utilised for the production of goods and services. In other words, such employment does not contribute to the output of an economy and is thus akin to a form of unemployment. Sometimes disguised unemployment could simply be a form of underemployment wherein the skills of a labour force are not utilised to their full capacity. In many other cases, however, such unemployment could simply be due to the lack of other alternative avenues of production where the surplus labour could be employed profitably.

### **QUAD**

As officials from the 'Quadrilateral' grouping of India, Australia, Japan and the U.S. meet in Singapore on Wednesday, their challenge will be to accurately describe their common agenda. The Quad is billed as four democracies with a shared objective to ensure and support a "free, open and prosperous" Indo-Pacific region.

During this round, the four countries are expected to discuss infrastructure projects they are working on, and building humanitarian disaster response mechanisms. Over the past few months, India and Japan have announced they will combine efforts on a number of projects in South Asia, including bridges and

roads in Bangladesh, an LNG facility in Sri Lanka and reconstruction projects in Myanmar's Rakhine province. Australia has unveiled an ambitious \$2 billion project to fund infrastructure and build maritime and military infrastructure in the Pacific region, on which it is willing to cooperate with other Quad members.

### **HIMA DAS IS UNICEF INDIA'S FIRST YOUTH AMBASSADOR**

The United Nations Children's Fund — India (Unicef—India) has appointed Asian Games gold-medalist sprinter Hima Das as the country's first ever youth ambassador.

The name of the woman athlete from Assam was announced by the world organisation in a tweet on Wednesday evening coinciding with the Children's Day celebrated on November 14 commemorating the country's first Prime Minister Jawaharlal Nehru's birthday.

Hailing from Nagaon district, Das clinched a gold medal in Women's 4x400 metre relay event at the 2018 Asian Games. She also won a silver in the Women's 400m Race event.

### **GROWTH-INDIA TELESCOPE'S FIRST SCIENCE OBSERVATION**

The 0.7 m GROWTH-India telescope at the Indian Astronomical Observatory located in Hanle, Ladakh, has made its first science observation which is a follow-up study of a nova explosion. Novae are explosive events involving violent eruptions on the surface of white dwarf stars, leading to temporary increase in brightness of the star.

The GROWTH-India telescope was commissioned six months ago soon after which it saw first light, on the night of June 12. “The telescope has been taking readings since then, and this is the first ‘follow-up’ work. We are happy to see this first science observation,” said G C Anupama, who Professor-in-Charge of the Indian Astronomical Observatory and is based at Indian Institute of Astrophysics (IIAP), Bengaluru.

The GROWTH-India telescope is part of the Global Relay of Observatories Watching Transients Happen. Its goals are threefold: (1) Search for explosions in the optical regime whenever LIGO group detects a Binary Neutron Star merger (2) study nearby young supernova explosions. (3) Study nearby asteroids.

#### **GOVERNMENT DIRECTIONS TO RBI UNDER SECTION 7 UNLIKELY**

The central board of the RBI will meet on Monday to discuss contentious issues that figured at the last board meeting — economic capital, governance issues of the central bank, boost for the micro, small and medium-sized enterprises and the prompt corrective action (PCA) framework for banks.

Though the government had ‘referred’ Section 7 of the RBI Act for ‘consultation’ on these issues, it may refrain from issuing directions as such a move will have wide ramifications.

Section 7 has never been used in the 83-year history of the bank. Invoking it would be interpreted as interference in the central bank’s autonomy. It would also have a bearing on international agencies such as the International Monetary Fund (IMF) that issue ratings for central banks. “These agencies have been raising the issue of Section 7 for sometime now

saying that ‘if such a provision exists, then how can RBI be independent?’ However, the RBI has been telling them that though that provision exists, it has never been used,” said an another source.

The RBI may also climb down from its position of stringent norms for the PCA framework for banks. As many as 11 public sector banks out of 21 are under PCA, which the government thinks is hampering loan growth. RBI may ease some of the conditions, which may help some lenders come out

On the governance issue, it is increasingly felt that the RBI management must be made accountable to the board. The board so far has refrained from taking up specific policy-related issues and its main focus has been to provide a broader vision to the central bank.

#### **BIMSTEC TO BOOST CONNECTIVITY**

Technical and Economic Cooperation was set up in 1997 and includes India, Bangladesh, Bhutan Myanmar, Nepal, Sri Lanka and Thailand. The first summit was held in 2004 and the secretariat established in Dhaka in 2014.

Following the fourth meeting of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) in Kathmandu in August,2018 there is a renewed push to conclude a series of proposals to further cooperation and connectivity.

The top among them are a master plan on connectivity and the motor vehicle agreement, which have been in the works for almost a decade. Other proposals like a parliamentarians forum, cooperation on cyber and space cooperation and maritime security are under discussion.

The dialogue is an outcome of the first meeting of National Security Advisors held in March 2017 and the second meeting of security chiefs held in March 2018.

The draft connectivity master plan aims to improve movement between member states in all modes of transport and is likely to be adopted during the ministerial meeting early next year.

India circulated a draft coastal security plan in December 2017 which has now been circulated to member states and their comments are awaited. A few days ago, India had sent a proposal on a joint parliamentarians forum and had asked for suggestions from the members.

BIMSTEC is already looking at adopting the model of ASEAN Coordinating Centre for Humanitarian Assistance (AHA) on disaster management. On the crucial issue of joint fight against terrorism, BIMSTEC already has a convention on combating international terrorism.

### **BOARD FOR FINANCIAL SUPERVISION**

The Reserve Bank of India performs this function under the guidance of the Board for Financial Supervision (BFS). The Board was constituted in November 1994 as a committee of the Central Board of Directors of the Reserve Bank of India. Primary objective of BFS is to undertake consolidated supervision of the financial sector comprising commercial banks, financial institutions and non-banking finance companies.

#### **Constitution**

The Board is constituted by co-opting four Directors from the Central Board as members for a term of two years and is chaired by the Governor. The Deputy Governors of the

Reserve Bank are ex-officio members. One Deputy Governor, usually, the Deputy Governor in charge of banking regulation and supervision, is nominated as the Vice-Chairman of the Board.

#### **BFS meetings**

The Board is required to meet normally once every month. It considers inspection reports and other supervisory issues placed before it by the supervisory departments.

The BFS oversees the functioning of Department of Banking Supervision (DBS), Department of Non-Banking Supervision (DNBS) and Financial Institutions Division (FID) and gives directions on the regulatory and supervisory issues.

#### **Functions**

Some of the initiatives taken by BFS include:

1. restructuring of the system of bank inspections
2. introduction of off-site surveillance,
3. strengthening of the role of statutory auditors and
4. strengthening of the internal defences of supervised institutions.

The Audit Sub-committee of BFS has reviewed the current system of concurrent audit, norms of empanelment and appointment of statutory auditors, the quality and coverage of statutory audit reports, and the important issue of greater transparency and disclosure in the published accounts of supervised institutions.

#### **Current Focus**

1. supervision of financial institutions
2. consolidated accounting
3. legal issues in bank frauds
4. divergence in assessments of non-performing assets and

5. supervisory rating model for banks.

### **SOUTH KOREAN CANDIDATE CHOSEN AS INTERPOL CHIEF**

International police organisation Interpol on Wednesday elected Kim Jong-yang of South Korea as president, beating a Russian whose candidacy had raised concerns in Europe and the United States about the risk of Kremlin interference.

### **THE SENTINELESE**

The Sentinelese, a negrito tribe who live on the North Sentinel Island of the Andamans, have not faced incursions and remain hostile to outsiders. The inhabitants are connected to the Jarawa on the basis of physical, as well as linguistic similarities, researchers say. Based on carbon dating of kitchen middens by the Anthropological Survey of India, Sentinelese presence was confirmed in the islands to 2,000 years ago. Genome studies indicate that the Andaman tribes could have been on the islands even 30,000 years ago.

The Govt. of India issued the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation, 1956 to declare the traditional areas occupied by the tribes as reserves, and prohibited entry of all persons except those with authorisation. Photographing or filming the tribe members is also an offence. The rules were amended later to enhance penalties. But restricted area permits were relaxed for some islands recently.

### **'NEEDS OF 70% OF POPULATION MET BY PRIVATE SECTOR'**

"India has invested in the healthcare sector for the last 70 years, yet the needs of 70% of the population are met by the

private sector," said Ayushman Bharat CEO Indu Bhushan.

While there have been significant efforts to alleviate poverty, nearly six crore people are driven to poverty each year due to healthcare expenses. "India is one of the fastest growing economy, yet government spending is low. Ayushman Bharat will address these paradoxes," Mr. Bhushan said.

### **ARTIFICIAL RAIN**

Artificial rain is produced by spraying clouds with substances like Silver Iodide (costly) or cheaper ones like solid carbon dioxide (dry ice) or even finely powdered Sodium Chloride. The process is called seeding. Often there are clouds, but no rain. This is because of a phenomenon called supercooling. The temperature of the cloud might be close to zero and there might even be crystals of ice in it. The water vapour in the cloud does not condense to liquid water. The super cooling gets disturbed by spraying the cloud with the chemicals mentioned above, using a small aeroplane for the purpose.

The 'super' phenomena (cooling, heating, saturation etc.) are perverse in a sense. Very pure water when heated in a clean vessel, often does not start boiling when expected. Crystals of the photographer's hypo (Sodium thiosulphate) easily dissolve in a little water when heated. But on cooling, crystals do not separate out. If the vessel is shaken vigorously, or if a small crystal of hypo is freshly added, then crystallization starts immediately. Making artificial rain is a similar way of intervening in the super cooling phenomenon.

### **ABHIJIT BOSE NAMED WHATSAPP INDIA HEAD**

WhatsApp on November 21 named Abhijit Bose as its India Head, meeting one of the key demands made by the government.

Mr. Bose, who will join the messaging platform early 2019, will build WhatsApp's first full country team outside of California and will be based in Gurugram, WhatsApp said in a statement. Mr. Bose and his team will focus on helping businesses, both large and small, connect with their customers, it added.

### **US COURT ALLOWS DR.REDDY'S TO SELL GENERIC VERSION OF 'SUBOXONE'**

Dr. Reddy's Laboratories shares surged over 8% in early trade on Wednesday following a U.S. court permitting the company to sell a generic version of British drugmaker Indivior's opioid dependence treatment drug Suboxone.

This decision vacates the District Court's preliminary injunction that had prohibited Dr. Reddy's from selling its generic version of Suboxone (buprenorphine and naloxone) sublingual film, a statement from the company said.

### **GAUSE'S LAW IN ECOLOGY**

Also known as the competitive exclusion principle, this refers to the proposition that the populations of two competing species cannot remain at stable levels over time. When two species compete for control over a limited amount of resources, the dominant species will take advantage over its weak competitor. This will cause the weaker species to get excluded from its previous territory and its population to drop over time. The law is named after Soviet biologist Georgii Gause although it was formulated first by American biologist Joseph Grinnell in his 1904 paper "The Origin and Distribution of the Chestnut-Backed Chickadee".

### **KHASHOGGI MURDER: EU CALLS FOR ACCOUNTABILITY**

The European Union's top diplomat Federica Mogherini said on Thursday that all those "really responsible" for the murder of journalist Jamal Khashoggi have to be held accountable.

After Saudi Arabia accepted responsibility and said that 21 people were in custody, with death penalties sought for five men, attention turned to whether the crown prince would be found culpable.

### **LEANING TOWER OF PISA STRAIGHTENED BY 4 CM**

The Leaning Tower of Pisa is now stable and has even straightened slightly thanks to engineering work to save the world-renowned tourist attraction, experts said on November 21.

The Tower was closed to the public in January 1990 for 11 years over safety fears, as its tilt reached 4.5 meters (15 feet) from the vertical. It has since been straightened by more than 40 centimetres. The medieval tower, a symbol of the power of the maritime republic of Pisa in the Middle Ages, has leaned to one side ever since building started in 1173.

### **TERM OF OBC PANEL EXTENDED AGAIN**

The Union Cabinet on Thursday approved the extension of term of the commission examining the issue of sub-categorisation of other backward classes (OBCs) in the Central list till May 31, 2019, according to an official statement.

This is the fourth extension of term given to the commission formed in October last year. The commission has held extensive meetings with all stakeholders, including State governments, State backward classes commissions, community



associations and general public, since its formation.

The commission has also obtained records, caste-wise data of OBCs admitted to higher educational institutions as well as similar caste-wise data of recruits in Central government departments, Central public sector undertakings, public sector banks and financial institutions.

### **'PSBS CAN SEEK LOCs AGAINST DEFAULTERS'**

To check wilful defaulters and fraudsters from fleeing the country, the government has now authorised CEOs of public sector banks (PSBs) to make request for issuance of look-out circulars (LOCs) against suspects. The move comes against the backdrop of defaults by Vijay Mallya, Nirav Modi and Mehul Choksi and thereafter, their fleeing the country.

The Ministry of Home Affairs (MHA) recently made changes in the circular by including CEOs of PSBs in the list of officials who can make request for issuance of LOCs to the ministry.

### **ONE MILLION CLOUD COMPUTING JOBS TO BE CREATED BY 2022 IN INDIA: REPORT**

With cloud computing becoming more prevalent in companies, both large and small, the global requirement for professionals is steadily on the rise and over a million jobs in the sector will be created in the country by 2022, according to a report by Ed-tech platform for executives Great Learning. It further reveals that companies are currently investing 4.5 times the rate of traditional IT spending in cloud infrastructure, a trend

that is expected to grow even faster by 2020.

### **CLOUD COMPUTING**

Cloud computing is shared pools of configurable computer system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over the Internet. Cloud computing relies on sharing of resources to achieve coherence and economies of scale, similar to a public utility.

Third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance. Advocates note that cloud computing allows companies to avoid or minimize up-front IT infrastructure costs. Proponents also claim that cloud computing allows enterprises to get their applications up and running faster, with improved manageability and less maintenance, and that it enables IT teams to more rapidly adjust resources to meet fluctuating and unpredictable demand. Cloud providers typically use a "pay-as-you-go" model, which can lead to unexpected operating expenses if administrators are not familiarized with cloud-pricing models.

Cloud computing shares characteristics with:

- Client-server model—*Client-server computing* refers broadly to any distributed application that distinguishes between service providers (servers) and service requestors (clients).
- Grid computing—"A form of distributed and parallel computing, whereby a 'super and virtual computer' is composed of a cluster of networked, loosely coupled computers acting in concert to perform very large tasks."

- Fog computing—Distributed computing paradigm that provides data, compute, storage and application services closer to client or near-user edge devices, such as network routers. Furthermore, fog computing handles data at the network level, on smart devices and on the end-user client side (e.g. mobile devices), instead of sending data to a remote location for processing.
- Mainframe computer—Powerful computers used mainly by large organizations for critical applications, typically bulk data processing such as: census; industry and consumer statistics; police and secret intelligence services; enterprise resource planning; and financial transaction processing.
- Utility computing—The "packaging of computing resources, such as computation and storage, as a metered service similar to a traditional public utility, such as electricity."
- Green computing- The goals of green computing are similar to green chemistry: reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, the recyclability or biodegradability of defunct products and factory waste. Green computing is important for all classes of systems, ranging from handheld systems to large-scale data centers.
- Cloud sandbox—A live, isolated computer environment in which a program, code or file can run without affecting the application in which it runs.

### **INDIA, CHINA SET FOR POST WUHAN BOUNDARY TALKS**

National Security Adviser Ajit Doval will be in Chengdu, China, on Friday for boundary talks with foreign minister and state councilor Wang Yi, to build on the

Wuhan informal summit in April between Prime Minister Narendra Modi and Chinese President Xi Jinping.

The 21st round of talks between the two Special Representatives (SRs), which will mainly take place on Saturday, is unlikely to yield any major breakthrough on the resolution of the boundary question, especially as India goes into election mode till the middle of next year.

### **AUSTRALIA LAUNCHES VISION 2035 FOR INDIA**

The Government of Australia has begun to implement a vision document that will shape bilateral ties with India till 2035. The announcement from Prime Minister Scott Morrison regarding implementing "India Economic Survey" was made in the backdrop of the ongoing visit to the country by President Ram Nath Kovind.

The India Economic Survey is a report authored by former Australian envoy Peter Varghese and was released earlier this year.

### ***FIVE PACTS SIGNED***

On the sidelines of the visit by President Kovind, Australia and India on Thursday concluded five agreements, including one between the Central Mine Planning and Design Institute based in Ranchi, and the Commonwealth Scientific and Research Organisation, Canberra. An agreement between the Acharya N.G. Ranga Agricultural University, Guntur, and the University of Western Australia, Perth, for cooperation in agricultural research and education was also signed.

## **ILLIQUID STOCKS**

Illiquid refers to the state of a security or other asset that cannot easily be sold or exchanged for cash without a substantial loss in value. Illiquid assets may also be hard to sell quickly because of a lack of ready and willing investors or speculators to purchase the asset. Additionally, a company may be deemed illiquid if it is unable to obtain the cash necessary to meet debt obligations. Illiquidity is the opposite of liquidity.

## **BANKS UNDER PCA SEE RETAIL LOAN SHARE JUMP 400 BPS**

The 11 state-run banks under the Reserve Bank's prompt corrective action (PCA) framework have seen a 400 basis points increase in their share of retail loans at 19% of the system in the four years ended September 2018, says a report.

The Reserve Bank began to place state-run banks under the PCA framework starting September 2016, when their NPAs soared beyond the regulatory tolerance levels. But the present data is for the period between March 2015 when their retail share was only from 15% and September 2018 when it rose to 19%, according to American brokerage Jefferies.

The PCA framework puts restrictions on weaker banks on many aspects, including fresh lending and expansion and salary hikes. These banks' NPAs hover in high double-digits, with that of IDBI Bank being the highest at close to 33% in the September 2018 quarter.

## **OCEANS ARE HEATING MUCH FASTER: STUDY**

The world's oceans have absorbed more heat than previously thought over the last

quarter of a century, scientists said on Thursday, leaving the earth more sensitive still to the effects of climate change. Oceans cover more than two thirds of the planet's surface and play a vital role in sustaining life on the earth.

According to their most recent assessment this month, scientists from the Intergovernmental Panel on Climate Change (IPCC) say the world's oceans have absorbed 90% of the temperature rise caused by man-made carbon emissions. But new research published in the journal Nature used a novel method of measuring ocean temperature.

It found that for each of the last 25 years, oceans may have absorbed heat energy equivalent to as much as 150 times the amount of electricity mankind produces annually. That is between 10-70% higher than previous studies showed.

## **LUNAR LANDER FACES CRUCIAL TEST**

The Chandrayaan-2 lunar lander's sensors are set to undergo a crucial test in the next few days as the mission races towards a planned take-off in around two months.

The Indian Space Research Organisation (ISRO) plans to fly the sensors on an aircraft over its artificial lunar site at Challakere to see how they will function and guide the Chandrayaan-2 landing craft when it starts descending on the lunar terrain. The test flight is slated tentatively for November 24.

The orbiter carrying the lander and a rover is scheduled to be sent to the Moon from Sriharikota on January 31 and expected to reach there sometime in February 2019.

## **PETYA AND NONPETYA RANSOMWARE**

Petya is a family of encrypting ransomware that was first discovered in 2016. The malware targets Microsoft Windows-based systems, infecting the master boot record to execute a payload that encrypts a hard drive's file system table and prevents Windows from booting. It subsequently demands that the user make a payment in Bitcoin in order to regain access to the system.

## **TECHPLOMACY**

Casper Klynge is Denmark's and the world's first Tech Ambassador spearheading the government's decision to elevate technology to a foreign policy priority as part of the 'TechPlomacy-initiative'. The diplomat, who in his previous roles had worked in conflict regions such as Kosovo and Afghanistan's Helmand province, said his current job is the most important role he had ever been involved. He said this was because the market capitalisation of companies such as Apple, Amazon, Microsoft, Alphabet (Google) and Facebook, had already overtaken the GDP of many countries and most of them would qualify for the international G20 forum. to work said these discussions included sharing of knowledge and best practices for solving global challenges.

## **CORRIDOR OF HOPE: ON THE KARTARPUR PROPOSAL**

The announcement by India and Pakistan of plans to operationalise a visa-free corridor between Dera Baba Nanak in Indian Punjab and Kartarpur Sahib in Pakistan's Punjab heeds a longstanding plea of Sikh pilgrims. That demand had gathered pace in 1995, when Pakistan renovated the Kartarpur gurdwara, situated on the site on the bank of the

Ravi where the founder of Sikhism, Guru Nanak, spent his last 18 years. Leaders from both sides, including Prime Ministers Atal Bihari Vajpayee and Benazir Bhutto, had pushed for it. In their effort to facilitate travel by Sikhs to important shrines on both sides of the border, they were also alert to the potential of such a move to heal ties amongst their people, and promote dialogue between the two governments. Given its easy logistics, the 4-km-long Kartarpur corridor is a low-hanging fruit as a meaningful confidence-building measure. The announcement now is particularly timely, with the 550th birth anniversary of Guru Nanak falling in November 2019.

## **TIGER RELOCATION**

At a time when the killing of tigress Avni in Maharashtra has triggered massive outrage, the death of a tiger in Odisha has sparked fears among forest officials and experts over the fate of the first interState translocation of tigers in the country. On November 15, the death of a male tiger was reported from the Satkosia Tiger Reserve. Forest Department officials ruled out poaching and the post-mortem report said a wound infested with maggots on the left side of its neck led to septicaemia, causing death. However, the fact that a young tiger died within five months of being translocated from Madhya Pradesh has raised more questions than answers.

With decades of efforts at conservation bearing fruit, India has 70% of the tiger population in the world. The count increased from 1,411 during 2006 to 1,706 during 2010 and 2,226 during 2014, according to census figures. Experts and tiger biologists say many tiger reserves in the country are dealing with the problem of plenty. Tigers are territorial animals,

and there are reports of the wild cat straying from the reserves, a few travelling hundreds of kilometres in search of food. In the past, tigers have been relocated within the reserves of a State. The translocation of tigers from the reserve of Madhya Pradesh to Satsokia was, however, far more ambitious. The project involved the Forest Departments of both States and needed the approval of the National Tiger Conservation Authority (NTCA) and scientists of the Wildlife Institute of India (WII).

### **SYED MODI INTERNATIONAL BADMINTON: SAMEER VERMA DEFENDS TITLE , SAINA LOOSES IN FINAL**

A gritty Sameer Verma pulled off a thrilling three-game victory over China's Lu Guangzu in the men's singles finals to retain the title at the Syed Modi International World Tour Super 300 in Lucknow on November 25.

Former champion Saina Nehwal failed to produce her best, losing in straight games to young Han Yue of China in a one-sided women's singles summit clash at the Syed Modi International World Tour Super 300 here Sunday.

### **DAVIS CUP FINAL: CLINICAL CILIC SEALS IT FOR CROATIA**

Marin Cilic clinched Croatia's second Davis Cup title as he beat France's Lucas Pouille 7-6(3), 6-3, 6-3 to give his side a decisive 3-1 lead in the final at Stade Pierre Mauroy on Sunday.

The powerful World No. 7 was relentless as he snuffed out any hope of a famous French fightback — giving Pouille little chance of sending the showpiece into a fifth rubber.

### **27 EU LEADERS APPROVE TERMS OF BREXIT DEAL**

The leaders of the 27 EU states will approve the agreement before being joined by British Prime Minister Theresa May. The leaders of the 27 other European Union members states on Sunday approved the terms of a historic Brexit deal with Britain, at a special summit in Brussels.

"EU27 has endorsed the withdrawal agreement and political declaration on the future EU-UK relations," EU Council president Donald Tusk announced on Twitter. The formal conclusions state that the Council of EU leaders "endorses the agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community."

It invites all EU institutions "to take the necessary steps to ensure that the agreement can enter into force on March 30, 2019, so as to provide for an orderly withdrawal". Britain will leave the EU on March 29.

### **106 JUDICIAL POSTINGS CLEARED IN A MONTH**

The government has singularly honoured the recommendations of the Supreme Court Collegium since October 3, the day Justice Ranjan Gogoi took office as 46th Chief Justice of India.

The Ministry of Law and Justice website shows that 106 judicial appointments to the High Courts and the Supreme Court were issued by the government from October 3 till date. These orders include the appointment of four new judges to the Supreme Court on November 1, less than a month since Chief Justice Gogoi took over as top judge. The government also approved 16 transfers of judges to the various High Courts. In fact, the total 122 appointments and transfers (106+16) come within 26 days of Chief Justice Gogoi taking over. That is, the number of orders of appointments issued by

the government is 4.8 times more than the number of days the Supreme Court worked since October 3.

### **ANDAMAN & NICOBAR ISLANDS: HOME TO A TENTH OF INDIA'S FAUNA SPECIES**

The islands, comprising only 0.25% of country's geographical area, has 11,009 species, according to a publication by the Zoological Survey of India. The Narcondam hornbill, its habitat restricted to a lone island; the Nicobar megapode, a bird that builds nests on the ground; the Nicobar treeshrew, a small mole-like mammal; the Long-tailed Nicobar macaque, and the Andaman day gecko, are among the 1,067 endemic faunal species found only on the Andaman and Nicobar Islands and nowhere else.

A recent publication by the Zoological Survey of India (ZSI) titled *Faunal Diversity of Biogeographic Zones: Islands of India* has for the first time come up with a database of all faunal species found on the island, putting the number at 11,009. The documentation proves that the islands, comprising only 0.25% of India's geographical area, are home to more than 10% of the country's fauna species. The publication, however, also cautions that tourism, illegal construction and mining are posing a threat to the islands' biodiversity, which is already vulnerable to volatile climatic factors.

"The presence of a large number of species in such a small area makes the Andaman and Nicobar Islands one of the richest ecosystems and biodiversity hot spots in India. Some of the species in A&N Islands are restricted to a very small area and thus more vulnerable to any anthropogenic threat," Kailash Chandra, Director-ZSI, and one of the authors of the

publication, said. The total area of the A&N Islands, which comprises of 572 islands, islets and rocky outcrops, is about 8,249 sq. km. The population of the islands, which includes six particularly vulnerable tribal groups (PVTGs) — Great Andamanese, Onge, Jarawa, Sentinelese, Nicobarese and Shompens — is not more than 4 lakh. The number of tourists visiting the islands has crossed the number of people residing in them, with latest data showing 4.87 lakh tourists visiting the islands annually.

### **HANTAVIRUSES**

First identified in 1993, hantaviruses cause severe and sometimes fatal respiratory infections and are known to infect lung cells. Though relatively rare, infections caused by them are expected to increase in the coming decades as temperatures across the globe rise due to climate change. The danger is that we are totally unprepared for this possibility. Hantavirus is transmitted to humans who inhale the virus from the urine, faeces, or saliva of infected rodents. Infection with hantavirus can progress to Hantavirus Pulmonary Syndrome (HPS). Early HPS symptoms include fatigue, fever and muscle aches, followed after a week or so by coughing and shortness of breath. HPS has a mortality rate of around 40%, according to the U.S. Centers for Disease Control and Prevention. No treatments or vaccines are available. A study on hantaviruses has been published in *Nature*, and its findings could point to a strategy to fight HPS.

### **HOME IS THE DEADLIEST PLACE FOR WOMEN, SAYS UN STUDY**

Many were murdered by abusive partners, while others were victims in so-called honour killings or disputes over dowries. Home is the most dangerous place for a woman, according to a United Nations study that found the number killed by a partner or relative is rising globally.

About 50,000 women were killed worldwide last year by a current or former partner or a family member — equating to 137 per day or six per hour — found the United Nations Office on Drugs and Crime (UNODC). “While the vast majority of homicide victims are men, women continue to pay the highest price as a result of gender inequality, discrimination and negative stereotypes,” said UNODC executive director Yury Fedotov in a statement.

The total number of such murders rose slightly between 2012 and 2017 — and the proportion of female homicide victims killed by partners or family rose from less than half in 2012 to nearly six in ten last year, said the report.

Many were murdered by abusive partners, while others were victims in so-called honour killings or disputes over dowries, it added. Murders by partners or family are often not one-off attacks, but the culmination of previous domestic abuse, said the report.

### **'MISINFORMATION' AS WORD OF THE YEAR**

Last year's word of the year was “complicit.” In 2016, it was “xenophobia.” Misinformation, as opposed to disinformation, was chosen on November 26 as Dictionary.com's word of the year.

### **RBI EASES ECB HEDGING NORMS FOR COMPANIES**

The Reserve Bank of India (RBI) has eased hedging norms for companies that raise funds through external commercial borrowings (ECB), a move that will lower the cost of hedging. A notification issued by the central bank said mandatory hedge coverage has been reduced from 100% to 70% under Track I of the ECB framework.

The RBI also clarified that the ECBs raised prior to this circular would be required to mandatorily roll over their existing hedge only to the extent of 70% of outstanding ECB exposure. According to the RBI, Track I refers to medium-term foreign currency-denominated ECBs with a minimum average maturity of 3-5 years. The move will help reduce costs for companies that raise foreign funds. “The cost of hedging has gone up in the last six months with the strengthening of the dollar. As a result, the ECB route was becoming unattractive to firms.”

### **BUYBACK**

A buyback, also known as a share repurchase, is when a company buys its own outstanding shares to reduce the number of shares available on the open market. Companies buy back shares for a number of reasons, such as to increase the value of remaining shares available by reducing the supply or to prevent other shareholders from taking a controlling stake.

A buyback allows companies to invest in themselves. Reducing the number of shares outstanding on the market increases the proportion of shares owned by investors. A company may feel its shares are undervalued and do a buyback to provide investors with a return. And because the company is bullish on its current operations, a buyback also boosts the proportion of earnings that a share is allocated. This will raise the stock price if the

same price-to-earnings (P/E) ratio is maintained.

Another reason for a buyback is for compensation purposes. Companies often award their employees and management with stock rewards and stock options; to make due on rewards and options, companies buy back shares and issue them to employees and management. This helps avoid the dilution of existing shareholders.

### **UKRAINE DECLARES MARTIAL LAW**

Emergency measures to be in place in border areas for 30 days; move comes after incident near Crimea. Russian President Vladimir Putin on Tuesday warned Ukraine against any “reckless acts” after Kiev declared martial law in response to Moscow’s seizure of three of its Navy vessels.

The Ukrainian Parliament late on Monday voted in favour of President Petro Poroshenko’s request for the introduction of martial law in border areas for 30 days.

The move came after Russian forces fired on, boarded and captured three of Kiev’s ships on Sunday off the coast of Crimea, sparking the most dangerous crisis between the ex-Soviet neighbours in years. The incident was the first major confrontation at sea in the long-running conflict pitting Ukraine against Moscow and Russian-backed separatists in the country’s east. It has raised fears of a wider escalation — in a conflict that has killed more than 10,000 people since 2014 — and prompted international calls for restraint.

### **CHINESE ACADEMIC CLAIMS TO HAVE GENE-EDITED TWINS**

Chinese health and medical ethics authorities started an investigation on Monday into claims by a scientist who released videos on YouTube, saying he had altered the genes of twins born earlier this month, creating the first gene edited babies.

Earlier, the Southern University of Science and Technology in Shenzhen, where the scientist, He Jiankui, holds an associate professorship, said it had been unaware of the research project and that Mr. He had been on leave without pay since February. The work is a “serious violation of academic ethics and standards”, the University said. The university issued a statement after Mr. He said in five videos posted on Monday that he used a gene-editing technology known as CRISPR-Cas9 to edit the genes of twin girls.

### **NASA'S INSIGHT SPACECRAFT LANDS ON RED PLANET**

NASA last landed on Mars in 2012 with the Curiosity rover. A NASA spacecraft designed to burrow beneath the surface of Mars landed on the red planet Monday after a six-month, 300 million-mile (482 million-kilometre) journey and a perilous, six-minute descent through the rose-hued atmosphere.

Flight controllers at NASA’s Jet Propulsion Laboratory in Pasadena, California, leaped out of their seats and erupted in screams, applause and laughter as the news came in. The three-legged InSight spacecraft reached the surface after being slowed by a parachute and braking engines, the space agency said. Updates were coming in via radio signals that take more than eight minutes to cross the nearly 100 million miles (160 million kilometres) between Mars and Earth.

It was NASA’s ninth attempt to land at Mars since the 1976 Viking probes. All but one of the



previous U.S. touchdowns were successful. NASA last landed on Mars in 2012 with the Curiosity rover. Viewings were held coast to coast at museums, planetariums and libraries, as well as New York's Times Square. The plan called for the spacecraft to go from 12,300 mph (19,800 kph) to zero in six minutes flat as it pierced the Martian atmosphere and settled on the surface.

### **DEATH PENALTY FREAKISHLY IMPOSED: JUSTICE KURIAN**

SC judge says 'rarest of rare' test 'inconsistently applied'; Justice Kurian Joseph, one of the senior-most judges of the Supreme Court, on Wednesday said the courts had been imposing the death penalty "arbitrarily and freakishly" all these years.

The dissent from within the very corridors of the Supreme Court comes almost four decades after a Constitution Bench upheld capital sentencing as a punishment under the law. A Constitution Bench in the Bachan Singh case in 1980, however, added a rider that judges should award the punishment only in the "rarest of rare category" of cases.

But Justice Kurian, in his judgment while heading a three-judge Bench hearing the appeal of a man sentenced to death in Chhattisgarh, said the test of "rarest of rare" had been "inconsistently applied" by courts. The judge, third in seniority in the Supreme Court, quoted from the 262nd Law Commission report to conclude that the so-called rider of "rarest of rare" had failed to prevent judges from arbitrarily sending the guilty to the hangman.

Justice Kurian asked what proper psychological/psychiatric evaluation is conducted before a convict is found to be beyond reform and sentenced to death.

"Without the assistance of a psychological/psychiatric assessment and evaluation it would not be proper to hold that there is no possibility or probability of reform," Justice Kurian wrote.

### **TRAIL OF DESTRUCTION: ON DAMAGE CAUSED BY CYCLONE GAJA**

It is now becoming clear that Cyclone Gaja is a major disaster, and its economic impact in Tamil Nadu is comparable to that of the tsunami of 2004. The devastation suffered by tens of thousands of people in several districts of the State has been severe, going well beyond the annual storm season losses. In the initial days after November 16, when the cyclone struck, the State heaved a sigh of relief since the death toll was relatively low.

But it is now clear that the suffering, the loss, and the displacement in large parts of Tiruvarur, Nagapattinam, Thanjavur and Pudukottai districts is of an enormous magnitude. Communities in the affected areas are distraught as houses have collapsed, farms lie ruined, water sources are contaminated and electricity supply remains disrupted. Many areas remain inaccessible because fallen trees have blocked roads.

In its report to the Centre, the Tamil Nadu government has estimated the number of people rendered homeless at 3.7 lakh, and houses destroyed at 3.4 lakh. The cyclone has crippled agriculture and livelihoods in a fertile region, felling thousands of productive trees and killing livestock. Between 60% and 80% of the coconut trees in the region have fallen, hobbling Tamil Nadu's farmers, who contribute a quarter of India's coconuts with the highest unit yield. Unlike paddy or many other crops, bringing coconut plantations back to life will take years.

## **NORWAY'S CARLSEN BEATS CARUANA TO DEFEND CHESS WORLD TITLE**

Reigning chess world champion, Norway's Magnus Carlsen smiles during a press conference after retaining the World chess Championship in London on November 28, 2018. Norwegian grandmaster Magnus Carlsen has defended his chess world championship title by beating American challenger Fabiano Caruana 3-0 in rapid tiebreaker games.

After their three-week match ended in 12 draws, Carlsen wrapped up the victory quickly on Wednesday with three straight wins to build an unassailable lead in the best-of-four rapid format. The tiebreakers were played with 25 minutes for each player per game, while the 12 previous classical-style games lasted up to seven hours each. It's the third time the 27-year-old Carlsen has successfully defended his title after winning it from Viswanathan Anand of India in 2013.

## **ISRO'S PSLV-C43 SUCCESSFULLY PLACES HYSIS**

This is the 13th flight of the core-alone version and 45th launch of the PSLV. Nearly three minutes after its lift-off at 9.57 a.m. on Thursday, the Indian Space Research Organisation's (ISRO) workhorse, the PSLV, carrying 31 satellites, soared in a trajectory crossing the path of the Sun and sped to inject the country's Hyper Spectral Imaging Satellite (Hysis), dubbed 'Sharp Eye', in its intended orbit.

The Hysis is an Earth observation satellite primarily to assist in a wide range of applications in agriculture, forestry, geological environments, coastal zones, among others.

The 30 satellites are one each from Australia, Canada, Colombia, Finland, Malaysia, Netherlands and Spain, and 23 from the USA. After 17 minutes from the

lift-off from the first launchpad of the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota, the PSLV C-43 injected the Hysis into a precise orbit of 636 km from the Earth.

"The heart of the system required for the Hysis satellite is basically an optical imaging detector chip. This chip has been indigenously designed by the Space Application Centre of the ISRO and fabricated at our semi-conductor lab at Chandigarh. I am sure that team ISRO can be proud that they are really giving an excellent space asset to India," he said.

## **51 PILOT WHALES DIE IN ANOTHER MASS STRANDING IN NEW ZEALAND**

Fifty-one pilot whales died on Friday in another mass stranding in New Zealand, less than a week after 145 pilot whales and nine pygmy killer whales perished in two other, unrelated strandings. In the latest stranding, up to 90 pilot whales beached themselves late Thursday at Hanson Bay on the remote Chatham Islands, said the Department of Conservation.

When staff arrived at first light, they said they found up to 40 of the whales had refloated themselves but another 50 had died on the beach. The department said one beached whale remained alive, which staff decided to euthanize due to its poor condition.

The Chatham Islands sit about 800 kilometers (500 miles) east of New Zealand's main islands and are home to about 600 people.

Last weekend, 145 pilot whales died on Stewart Island. By the time conservation workers arrived there, about 75 of the whales were already dead and they decided to euthanize the others by

shooting them due to their poor condition and remote location. On Sunday, 10 pygmy killer whales were found stranded at Ninety Mile Beach on the North Island.

Dr. Lundquist said that while scientists don't typically know why individual whale strandings occur, they believe there are probably a range of reasons. He said they could be caused by the whales navigating incorrectly, trying to escape from predators, or some of them suffering injuries or illness. He said there could also be man-made factors like underwater noise. Whale strandings are most common in New Zealand during the Southern Hemisphere spring and summer.

### **PANDAVANI**

Pandavani is a folk singing style involving narration of tales from the ancient Indian epic Mahabharata. The singing also involves musical accompaniment. Bhima, the second of the Pandava is the hero of the story in this style. This form of folk theatre is popular in the central Indian state of Chhattisgarh and in the neighbouring areas of Madhya Pradesh, Orissa and Andhra Pradesh. Jhaduram Dewangan and Teejan Bai are the most renowned singers of this style. Among contemporary artists, Ritu Verma is popular along with others such as Shantibai Chelak and Usha Barle.

### **PHAD PAINTING**

Phad painting or Phad is a style religious scroll painting and folk painting, practiced in Rajasthan state of India. This style of painting is traditionally done on a long piece of cloth or canvas, known as *phad*. The narratives of the folk deities of Rajasthan, mostly of Pabuji and Devnarayan are depicted on the *phads*. The Bhopas, the priest-singers traditionally carry the painted *phads* along with them and use these as the mobile temples of the folk deities.

The *phads* of Pabuji are normally about 15 feet in length, while the *phads* of Devnarayan are normally about 30 feet long. Traditionally the *phads* are painted with vegetable colors.

The Joshi families of Bhilwara, Shahpura in Bhilwara district of Rajasthan are widely known as the traditional artists of this folk art-form for the last two centuries. Presently, Shree Lal Joshi, Nand Kishor Joshi, Pradip Mukherjee, Prakash Joshi and Shanti Lal Joshi are the most noted artists of the *phad painting*, who are known for their innovations and creativity.

### **POWADA**

The Powada is a genre of Marathi poetry that emerged during the late 17th century in India. The powadas are a kind of ballad written in an exciting style and narrate historical events in an inspiring way. The composer-cum-singers of the powadas are known as *Shahirs*. Earlier, powadas were mostly composed by the eyewitnesses of the great events celebrated in those ballads. During the Peshwa rule, several celebrated *Shahir* poet-singers, which include Ram Joshi (1762–1812), Anant Phandi (1744–1819), Honaji Bala (1754–1844) and Prabhakar (1769–1843) composed a number of powadas.

### **OPERATION SMILE**

Operation Smile is a nonprofit medical service organization founded in 1982 by Dr. William P. Magee, Jr. and his wife Kathy Magee. It is headquartered in Virginia Beach, Virginia. In addition to providing cleft lip and palate repair surgeries to children worldwide, Operation Smile works as a non-governmental organization to reduce the occurrence of cleft lips and palates worldwide; develops ambassadorships to raise awareness of cleft issues; sponsors a world care program for

international cases requiring special care; organizes chapters and foundations worldwide to assist countries in reaching self-sufficiency with cleft surgeries; hosts a U.S. care network to assist families in the U.S. with cleft issues and develops and administers worldwide education programs related to cleft issues; and organizes student leadership programs.

### **GSP**

The Generalized Scheme of Preferences, or GSP, is a preferential tariff system which provides for a formal system of exemption from the more general rules of the World Trade Organization (WTO), (formerly, the General Agreement on Tariffs and Trade or GATT).[1] Specifically, it is a system of exemptions from the most favored nation principle (MFN) that obliges WTO member countries to treat the imports of all other WTO member countries no worse than they treat the imports of their "most favored" trading partner. In essence, MFN requires WTO member countries to treat imports coming from all other WTO member countries equally, that is, by imposing equal tariffs on them.

GSP exempts WTO member countries from MFN for the purpose of lowering tariffs for the least developed countries, without also lowering tariffs for rich countries. The idea of tariff preferences for developing countries was the subject of considerable discussion within the United Nations Conference on Trade and Development (UNCTAD) in the 1964. Among other concerns, developing countries claimed that MFN was creating a disincentive for richer countries to reduce and eliminate tariffs and other trade restrictions with enough speed to benefit developing countries. Recently, USA has withdrawn GSP concession from india for \$75 million of imports.

### **LIST OF CENTRALLY SPONSORED SCHEMES**

**(important schemes are highlighted/underlined though it is advisable to know all )**

1. DR. Shayama Prasad Mukherji Durgatna Sahayata Yojna
2. Crop Residual Management Scheme
3. Deen Dayal Upadhaya Gram Jyoti Yojna
4. Ekikrit Kaushal Vikas Yojna
5. Soil health Card Scheme
6. Smart Cities Mission
7. UDAN Scheme'
8. Ayushman Bharat
9. Universal Immunization Program
10. Saubhagya Yojna
11. PM Fasal Bima Yojna
12. Parampragat Krishi Vikas Yojna
13. e-National Agricultural Market Scheme e- NAM
14. Jal Kranti Abhiyan Yojna
15. AMRUT Scheme
16. PM Kaushal Vikas Yojna
17. PM Krishi Sinchai Yojna
18. One Stop Centre-SAKHI
19. e-Way Bill Scheme
20. Neeli Kranti Scheme
21. Standup India scheme
22. Rastriya Krishi Bazar Portal
23. Rastriya Krishi Vikas Yojna
24. Smart gram Yojna
25. PM ujjawala Yojna
26. Mission Indra Dhanush
27. PM Mudra Yojna
28. PM Suraksha Bima Yojna
29. Pm Jivan Jyoti Bima Yojna
30. Atal Pension Yojna
31. PM Awas Yojna
32. Saansad Adarsh Gram Yojna
33. PM Jan Dhan Yojna
34. Multi-sectoral Nutrition Mission
35. National Nutrition Mission
36. Sukanya Samridhi Yojna

37. Beti Bachao Beti Padhao
38. Deen Dayal Jan Awas Yojna
39. Shayama Prasad RURBAN Mission
40. Setu Bharatam scheme
41. Ujala Yojna
42. PM Matru Vandana Yojna
43. ESI Scheme
44. Ishaan
45. Nayi Roshni
46. Nayi Savera
47. Nai Manjil Yojna
48. Sarva Siksha Scheme
49. MGNAREGA
50. Make in India
51. Startup India
52. Namami Gange
53. Kasturba Gandhi Balika yojna
54. Swaccha Bharat Yojna
55. Darwaja Band Scheme
56. Sugamya Bharat Yojna (accessible India Yojna)
57. National Gokul Mission
58. Come and Play Scheme
59. Deen Dayal Antyodya Yojna
60. Livelihood Rural Express Scheme
61. HRIDAY scheme
62. Samapda Scheme
63. Atal Innovation Mission
64. PM Youth Scheme
65. Roshni Scheme
66. PM Surakshit Matritva Yojna
67. Rashtriya Vayoshri Yojna
68. Maternity Benefit Scheme
69. STEP Yojna
70. SABLA
71. Integrated Child Development Scheme
72. Kayakalp Yojna
73. PM Bhartiya Jan Ausadhi Yojna
74. Stri Swabhimaan Yojna
75. Saathi Yojna
76. Samartha Yojna
77. Deen Dayal Shrameva Jayate Scheme
78. Powertex Scheme
79. Sagarmala Yojna
80. Bharatmala Yojna
81. USTAD Scheme
82. PM Rural Digital Literacy Scheme
83. DARPAN Scheme
84. National Disaster Management Scheme
85. Atal Bhu Jal Yojna
86. Electoral Bond Scheme
87. Deen Dayal SPARSH Scheme
88. Vikalp Scheme