

# My Notes....

## NATIONAL

### GSAT-19 launched

The Indian Space Research Organisation on 5 June 2017 launched the **GSAT-19 satellite**, one of the heaviest communication satellites, **with the GSLV MK III-D1 rocket**. The rocket became the heaviest to be launched by the Indian space agency ever with the heaviest single payload put in orbit as well. The rocket lifted off from the Satish Dhawan Space Centre at Andhra Pradesh's Sriharikota. The rocket has the capability to carry a **payload as heavy as 4,000 kg** and put in into the **Geosynchronous Transfer Orbit**. It can also carry a 10,000 kg payload and put in into the Low Earth Orbit.

### What

1. The **Geosynchronous Satellite Launch Vehicle Mark-III (MkIII D-1)** has successfully demonstrated its capabilities with **the injection of GSAT-19 into the desired orbit**.
2. It is a great success in the **first maiden attempt and GSLV MkIII has successfully put in orbit GSAT-19** which is a next generation satellite.
3. ISRO has plans to use the rocket for manned missions in the future. **The rocket is a three-stage launch vehicle** which has two solid motor strap-ons, a **liquid propellant core stage and a cryogenic stage**. The rocket is 43.39 metre in height which is roughly the height of a 12-storey building.
4. Today's GSLV mission is significant for India as ISRO had been depending on foreign launchers for orbiting communication satellites weighing more than 2,300 kgs.
5. **The GSLV MkIII-D1 is capable of lifting payloads or satellites weighing upto 4,000 kgs into the GTO** and 10,000kgs into the Low Earth Orbit.
6. It was a textbook launch as every stage of the three-stage GSLV MkIII with indigeneous cryogenic engine performed well.

### What is the GSLV-MkIII

1. The **GSLV-Mk III is capable of launching a four-tonne satellite into Geosynchronous Transfer Orbit (GTO)**. The rocket is also capable of placing a payload weighing up to eight tonnes in **Low Earth Orbit (LEO)**, enough to carry a manned module.
2. **This is India's first fully functional rocket to be tested with a cryogenic engine** that uses liquid propellants — **liquid oxygen and liquid hydrogen**.
3. It took nearly 25 years, 11 flights and over 200 tests on different components of the rocket for it to be fully realised. GSLV-Mk III is a three-stage vehicle with two solid motor strap-ons (S200), a liquid propellant core stage (L110) and a cryogenic stage (C-25).
4. The mission could also pave the way for manned missions into space. **Currently, there are just three countries - US, Russia, and China** - which have the capability of launching manned missions. If successful, the GSLV-Mk III — earlier called Launch Vehicle Mark-3 or LVM-3 — could be India's vehicle of choice to launch people into space.
5. The rocket, which has about twice the capability of the GSLV-Mk II in terms of the payload it can place into orbit, **weighs 640 tonnes and has cost the country** an estimated Rs 400 crore.
6. **The rocket's first developmental flight will carry the GSAT-19 satellite** — developed to help improve telecommunication and broadcasting areas.

### India becomes full members of SCO

**India and Pakistan on 9 June 2017 became full members of the Shanghai Cooperation Organisation (SCO) summit at Astana.** India's membership was strongly

pushed by Russia while Pakistan's entry into the grouping was backed by China. India and Pakistan are now members of the SCO.

#### What

1. With the expansion of the grouping, **the SCO will now represent over 40 per cent of humanity and nearly 20 per cent of the global GDP.**
2. As an SCO member, India is expected to have a bigger say in pressing for concerted action in dealing with terrorism as well as on issues relating to security and defence in the region.
3. **India, one of the largest energy consuming countries in the world,** is also likely to get greater access to major gas and oil exploration projects in Central Asia as many of the SCO countries have huge reserves of oil and natural gas.
4. **The SCO was founded at a Summit in Shanghai in 2001** by the Presidents of Russia, China, Kyrgyz Republic, Kazakhstan, Tajikistan and Uzbekistan.
5. The SCO had set the ball rolling to make India a member of the bloc during its summit in Ufa, Russia, in July, 2015, when administrative hurdles were cleared to grant membership to India and Pakistan.

#### 'Skill for Life, Save a Life' initiative

Shri J P Nadda, Union Minister for Health and Family Welfare launched the **'Skill for Life, Save a Life' initiative**. India enjoys a **demographic dividend as more than 65% youth are below the age of 35 years** and the Government is determined to seize this opportunity by providing adequate skills and employability to the youth for a strong foundation for continued and sustainable growth.

#### What

1. **'Skills for Life, Save a Life' Initiative' aims to upscale the quantity and quality of trained professionals in the healthcare system.**
2. Under this initiative various courses are planned to be initiated targeting specific competencies for healthcare professionals as well as for general public.
3. This shall **reduce the gap between expectations of employment of the youth and the actual job they get.** The Health Minister further pointed out that skill enhances economy of the country, too by reducing the gap between demand and supply of trained and skilled manpower in every field.
4. The potential for skilled healthcare workers and professionals is immense in the country. Such courses ensure that the health sector gets the adequate skilled health workers.
5. The curriculum has been designed by **National Institute of Health and Family Welfare (NIHFW)** and AIIMS, Delhi.
6. The Health Minister highlighted that in India 1,324 accidents occur on roads every day and a life is lost every 4 minutes and measures taken in the first 10 minutes can save a life.
7. The Ministry is initiating its **'Skill a Life, Save a Life'** program by launching **First Responder course** for professionals as well as general public, to be conducted in Central and State government training institutes from the next month across the country in each district, to empower every single citizen of the country to be the first person to provide first aid and initial care in case of an emergency.

#### SATH program launched

**NITI Aayog has launched SATH, a program providing 'Sustainable Action for Transforming Human capital'** with the State Governments. The vision of the program is **to initiate transformation in the education and health sectors.** The program addresses the need expressed by many states for technical support from NITI.

#### What

1. **SATH aims to identify and build three future 'role model' states for health systems.**
2. NITI will work in close collaboration with their state machinery to design a robust roadmap of intervention, develop a program governance structure, set up

- monitoring and tracking mechanisms, hand-hold state institutions through the execution stage and provide support on a range of institutional measures to achieve the end objectives.
3. The program will be **implemented by NITI Along With McKinsey & Company and IPE Global consortium**, who were selected through a competitive bidding process.
  4. To select the three model states, NITI defined a three-stage process – **expression of interest, presentations by the states and assessment of commitment to health sector reforms**.
  5. NITI invited all states and UTs to participate in the program. Sixteen states expressed prima facie interest, of which fourteen made their presentations.
  6. Andhra Pradesh, Assam, Bihar, Chandigarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Odisha, Punjab, Telangana and Uttar Pradesh presented their project proposal to a Committee headed by Member of NITI Aayog, Shri Bibek Debroy and comprising of CEO, Amitabh Kant as well as a representative from the Ministry of Health and Family Welfare.
  7. Of these fourteen states, **five have been shortlisted**. Subsequently, three will be selected on the basis of further evaluations and objective assessment of criteria affecting the potential for impact and likelihood of success.
  8. **Metrics such as MMR, IMR, incidence of malaria and others have been considered for determining potential impact** while density of doctors and nurses, compliance to IPHS norms are some of the metrics used to determine likelihood of success.
  9. The program will be launched in the three selected states after the signing of MoUs.

### India ratifies ILO conventions

**India on 13 June 2017 ratified two key ILO conventions on child labour**, according to a statement issued by the **International Labour Organisation (ILO) in Geneva**. Labour Minister Bandaru Dattatreya, who is Geneva, said the ratification reaffirmed India's "commitment to a child labour free society".

#### What

1. According to ILO, **"the Government of India deposited with the International Labour Office the instruments of ratification of the two fundamental ILO Conventions concerning the elimination of child labour, the Minimum Age Convention (No 138) and the Worst Forms of Child Labour Convention (No 182)."**
2. **India is the 170th ILO member state to ratify convention No 138**, which requires states to set a minimum age under which no one shall be admitted to employment or work in any occupation, except for light work and artistic performances.



3. **India is the 181st member to ratify convention No. 182**, which calls for the prohibition and elimination of the worst forms of child labour, including slavery, forced labour and trafficking; the use of children in armed conflict; the use of a child for prostitution, pornography and in illicit activities (such as drug trafficking); and hazardous work.

#### Govt launches Tele-Law

The Union government has launched 'Tele-Law' – a programme aimed at providing legal aid services in rural areas through digital technology. The programme is a continuation to the Access to Justice Project to Marginalised Persons implemented by UNDP in 2008. The pilot project is being undertaken by the Ministry of Law and Justice in collaboration with the **Ministry of Electronics and Information Technology and will be launched across 1000 Common Service Centres (CSC) in Uttar Pradesh and Bihar** and 500 CSCs will be tested in its first phase.

#### What

1. Among the services offered will be video conferencing with lawyers so as to **enable people seeking legal advice and counselling**.
2. A panel of lawyers from state capitals will also be provided via the National Legal Services Authority (NALSA). Legal school clinics, District Legal Service Authorities, voluntary service providers and Non-Government Organisations working on legal aid and empowerment can also be connected through CSCs at the panchayat level.
3. A direct and first contact for people seeking legal advice would be the Para Legal Volunteers (PLV) engaged by the CSC who would assist and help people understand the legal issues and elucidate on the advice given by lawyers. The scheme plans to appoint 1000 women PLVs who would work through CSCs with the agenda to promote women participation and empowerment.
4. Available in a CSC for 10 days a month, the trained volunteers would connect people with lawyers through video conferencing and record the progress of the applicants' cases and grievances. Further, they would be required to submit their maintained records to the **District Legal Service Authority** every week.
5. **Tele-Law will fulfill our commitment to ensure access to justice & empowerment of the poor**. The Common Services Centers and Para Legal Volunteers will offer easy legal advice to litigants in rural India making them digitally and financially inclusive.

#### Mission Retro-Fitment launched

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

#### What

1. The **Mission Retro-Fitment is an ambitious program of the ministry of railways** to upgrade the level of furnishing & amenities in the coaches of Indian Railways.
2. The refurbished coaches will have better furnishing, aesthetics & amenities and better safety features which are aimed at providing a safe and comfortable travel to the railway passengers.
3. Under Mission Retro-Fitment, **40,000 coaches will be refurbished and retrofitted in the next five years**.
4. The mission aims to induct about 40,000 coaches with upgraded interiors by 2022-23. **The mission will be one of the largest retro fitment projects in the world**.
5. The mission will be carried out without affecting the traffic operation.
6. The refurbished coaches will have panels with LED lights, modular toilets with plumbing, branded fittings, powered Venetian blinds, anti-Graffiti coating etc.

#### IMD's competitiveness list

**India has been ranked 45th**, down four notches from last year, in terms of competitiveness in the annual rankings compiled by the **International Institute for Management Development's (IMD)** which saw Hong Kong topping the list. The US was "pushed out" of the top three slots while Hong Kong consolidated its dominance of the

annual rankings for the second year in the list compiled by the **IMD World Competitiveness Center**.

#### What

1. **Switzerland and Singapore were ranked second and third respectively**, with the US at the fourth spots — its lowest position in five years and down from third last year.
2. The Netherlands completed the top five, jumping up from eighth last year. Others in the top 10 list are Ireland at 6th, Denmark 7th, Luxembourg (8th), Sweden (9th) and the UAE at 10th.
3. **China improved its position by seven places to 18th**, thanks to its dedication to international trade.
4. The bottom of the table, meanwhile, is largely occupied by countries experiencing political and economic upheaval. Ukraine was ranked 60th, while Brazil was placed at the 61st position and Venezuela at 63rd.
5. **The IMD World Competitiveness Center is a research group at the IMD business school in Switzerland.** It has been **publishing the rankings every year since 1989**.
6. This year's list comprises **63 countries** with Cyprus and Saudi Arabia making their first appearance. Meanwhile, for the first time this year, the IMD World Competitiveness Center also published a separate report ranking countries' digital competitiveness.
7. At the top of the digital ranking is Singapore, followed by Sweden, the US, Finland and Denmark, while the bottom five are Indonesia, Ukraine, Mongolia, Peru and Venezuela.

#### Rankings

1. Hong Kong topped the world competitiveness list
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#### Prithvi-II missile successfully test fired

India was on 2 June 2017 successfully **test-fired its indigenous nuclear-capable Prithvi-II missile** from the Integrated Test Range (ITR) at Chandipur in Odisha. **The surface-to-surface medium-range ballistic missile** was fired from a mobile launcher from launch complex-3 of ITR.

#### What

1. **The test was part of the regular training exercise by the Indian armed forces.**
2. The launch was carried out by the **pecially formed strategic force command (SFC)**, which was monitored by scientists of the Defence Research and Development Organisation (DRDO).
3. The Prithvi-II missile, which has a strike range of 350 km, is capable of carrying 500 kg to 1,000 kg of warheads and is thrust by liquid propulsion twin engines.
4. **The missile was inducted into Indian armed forces in 2003.**
5. **It is the first missile to have been developed by the DRDO** under the Integrated Guided Missile Development Programme.

#### First automated fertilizer handling system

**Krishnapatnam Port has installed a first of its kind Automated Fertilizer Handling System in the country** which handles cargo operations from vessel to rail or road, cutting short handling time to hours. Amitabh Kant, CEO, Niti Aayog, inaugurated the **automated fertilizer handling system**, at the Krishnapatnam Port, the **country's largest all-weather**, deep water port located in Nellore district of **Andhra Pradesh on the country's east-coast**.

### What

1. **This facility is equipped to handle fertilizer cargo operations right from the cargo discharge from vessel** till evacuation by road/rail. This all weather cargo handling solution will enable the port to meet the increasing demand of imported fertilizers.
2. The system integrates multiple processes to augment the fertilizer handling capacity at Krishnapatnam Port while offering customised solutions to fertilizer importers.
3. **The launch of Automated Fertilizer Handling System is a huge operational leap for the port** which connects with the Prime Minister Modi's initiative of Make in India and his dream of Digital India.
4. **Innovation and operational efficiency** has always been at the centre of the scheme of things at Krishnapatnam Port.
5. **This facility will enhance Krishnapatnam port's existing handling capacity** to more than three million tonnes per annum.

### Test of ATGM Nag

The **Anti-Tank Guided Missile Nag** was successfully flight tested in the **desert ranges of Rajasthan**. The **Fire and Forget 3rd generation ATGM Nag** is incorporated with many advanced technologies including the **Imaging Infrared Radar (IIR)** Seeker with integrated avionics, a capability which is possessed by few nations in the world.

### What

1. **The capabilities of the top attack ATGM Nag** is unique in nature and in mission to destroyed the target successfully.
2. The test has been carried out by DRDO Scientists of the **Dr. A.P.J. Abdul Kalam Missile Complex at Hyderabad**, DL Jodhpur, HEMRL and ARDE at Pune. Also the ground systems were developed by the Ordnance Factory, BEL and L&T. Senior officials from the Armed Forces participated in the tests.
3. The successful flight test of 3rd generation ATGM Nag further strengthens the country's defence capabilities.

### GRDI 2017

**India has surpassed China** to secure the top position among **30 developing countries on ease of doing business**, according to a study that cited India's rapidly expanding economy, relaxation of FDI rules and a consumption boom as the key drivers. **The 2017 Global Retail Development Index (GRDI), now in its 16th edition**, ranks the top 30 developing countries for retail investment worldwide and analyses **25 macroeconomic and retail-specific variables**.

### What

1. India's rapidly expanding economy; **easing of foreign direct investment (FDI) rules** and a consumption boom are the key drivers for India's top ranking in the GRDI.
2. The GRDI titled **'The Age of Focus'** ranks China in second place. Despite its slower overall economic growth, the market's size and the continued evolution of retail still make China one of the most attractive markets for retail investment.
3. The study is unique in that it not only identifies the markets that are most attractive today, but also those that offer future potential," said the management consulting firm A T Kearney in a statement.
4. **India's retail sector has been growing at an annual rate of 20 per cent**. Total sales surpassed the USD 1 trillion-mark last year and the sector is expected to double in size by 2020.
5. Rapid urbanisation and a growing middle class with higher income levels is driving up consumption across the country, the consultancy group said.
6. **The government's continued support to relax FDI regulations** in key areas of the retail sector have provided further boost to its growth, it noted.

7. **The government has allowed 100 per cent foreign ownership in B2B e-commerce businesses** and for retailers that sell food products. India's retail sector has also benefited from the rapid growth in e-commerce.
8. It is projected to grow 30 per cent annually and reach USD 48 billion by 2020. Retailers have been quick to seize the opportunity with 86 per cent of e-commerce dominated by pure-play online retailers in 2016.
9. **The Indian government's effort to boost cashless payments** (witnessed in the recent nationwide demonetisation exercise) and reform indirect taxation with a nationwide goods and services tax (GST) are also expected to accelerate adoption of formal retail.

### India's first Rural LED Project

Government of India, through the **Energy Efficiency Services Limited (EESL) under the Ministry of Power**, would be retrofitting 10 lakh conventional street lights with LED lights in Gram Panchayats of 7 districts in Andhra Pradesh. **This is the first project for rural LED street lighting in the country** under the Government of India's **Street Lighting National Project (SLNP)**. In the first phase, the replacement will be undertaken in gram panchayats of the districts of Guntur, Prakasham, Nellore, Kurnool, Kadapa, Ananthapur and Chittoor.

#### What

1. This replacement drive in rural areas **will help the gram panchayats to cumulatively save approximately 147 million units of electricity annually** and lead to reduction of 12 crore tonnes of CO<sub>2</sub>.
2. The entire upfront capital cost of this project is being funded by French Development Agency Agence Française de Développement (AFD). As part of the project, EESL would be carrying out the entire annual maintenance and warranty replacement in these gram panchayats for a period of 10 years.
3. **Andhra Pradesh was the first state to seek assistance from EESL to replace conventional street lighting with LED lighting in Visakhapatnam**, after the cyclone Hudhud caused extensive damage to the then existing street lighting infrastructure.

### OIL makes oil discovery in Assam

**Oil India Ltd (OIL)**, the nation's second largest state explorer, on 6 June 2017 said it has made an **oil discovery in the Baghjan area of upper Assam basin**. The well South Baghjan-2 encountered multiple sands in **Narpuh and Lakadong+Therria formations**.

#### What

1. On testing, a 15 meter thick sand at a depth of 4,154 meters produced oil at the rate of 100 cubic meters per day," the company said in a statement. The discovery was made in the **Baghjan Petroleum Mining Lease (PML) in the upper Assam basin**.
2. Presently, the well has been put on regular production, said the company, adding further appraisal of the discovery is planned that is likely to enhance the oil and gas production.
3. **OIL had also made 10 discoveries** in its operational areas of Assam during 2016-17. The discoveries have opened up avenue for further exploration of already identified leads / prospects in the area.

### India's first 'private' railway station

Habibganj in the suburbs of Bhopal will redefine the concept of a railway station in India. **The country's first railway station to be redeveloped as a public-private partnership (PPP), Habibganj** is set to become a swanky commercial hub with shops, offices and hotels, all in a span of three years. The operation and maintenance responsibilities for the station have been given to **Bhopal-based Bansal Group for a period of eight years**. It has also received four land parcels on a 45-year lease. The group, which operates in the infrastructure and construction sector, also runs a television channel and educational institutions. It won the bid in 2016. Bansal Group will invest Rs100 crore to overhaul the station which was opened in 1979, and around Rs350 crore to develop four commercial land parcels adding up to 17,245 sq. m.

### What

1. On 9 June, railway minister **Suresh Prabhu will launch commencement of the station re-development work in Bhopal.**
2. The Habibganj railway station will be designed as a world-class transit hub, with a central concourse equipped with amenities for waiting passengers; arriving and departing passengers will be segregated.
3. The **environment-friendly station will be powered by solar energy** and has facilities for the differently-abled. The station will have six lifts, 11 escalators and three travelators, along with two underpasses of 4m each provided for arriving passengers.
4. **Being the first PPP railway station project**, the success of the project is very important as it will become a role model for the other projects. The project's success will give confidence to infrastructure developers who have been careful in investing in such brownfield projects.
5. The Habibganj project was undertaken as part of the Indian Railways' ambitious plan to **re-develop 400 A1 and A category railway stations.**
6. Apart from Habibganj, other projects being handled by IRSDC are Anand Vihar (Delhi), Bijwasan (Delhi), Chandigarh, Surat (Gujarat), Mohali (Punjab) and Gandhinagar (Gujarat).
7. Indian Railways' ambition of redeveloping 400 stations into world-class facilities is completely based on land monetization.

### IDCF launched

The Ministry of Health and Family Welfare has launched the **Intensified Diarrhea Control Fortnight (IDCF) in order to intensify efforts to reduce child deaths due to diarrhoea.** The Ministry has made it a national priority to bring health outcomes among children to a level equitable with the rest of the world. Through this initiative, the Ministry will mobilize health personnel, State Governments and other stakeholders to prioritize investment in control of diarrhoea, **one of the most common childhood illnesses.** It aims to create mass awareness about the most effective and low-cost diarrhoea treatment— a combination of **Oral Rehydration Salt (ORS) solution and Zinc tablets.**

### What

1. During the fortnight, intensified community awareness campaigns on hygiene and promotion of ORS and Zinc therapy will be conducted at state, district and village levels. Nearly 12 crore under 5-children will be covered during the program across the country.
2. Almost all the deaths due to diarrhoea can be averted by preventing and treating dehydration by use of **ORS (Oral Rehydration Solution)**, administration of Zinc tablets along with adequate nutritional intake by the child. Diarrhoea can be prevented with safe drinking water, sanitation, breastfeeding/appropriate nutrition and hand-washing.
3. **ASHA worker would undertake distribution of ORS packets to households with under-five children in her village.**
4. ORS-Zinc Corners will be set-up at health care facilities and non-health facilities such as Schools and Anganwadi centres. Frontline workers will hold demonstration of ORS preparation, along with counselling on feeding during diarrhea and hygiene and sanitation.
5. The activities are also being supported by other ministries of the Government of India, especially the Education, Panchayati Raj Institutions, Women and Child Development, and Water and Sanitation.
6. **India has realized impressive gains in child survival over the last two decades.** There has been a consistent decline in **Infant Mortality Rate (IMR)** and Under-Five Mortality Rate (U5MR). Increased access to immunization and child healthcare services during this period have greatly contributed to this decline. Yet, an estimated 1.1 million children die each year in India, including approximately 1.1 lakh deaths due to diarrhoea.

## RSETI Diwas 2017

As part of **multi-pronged strategy to address rural poverty**, Ministry of Rural Development (MoRD) is undertaking two initiatives in skill development under the National Rural Livelihoods Mission (NRLM):

1. Placement linked skill development program called DDU-GKY which allows skilling and assured wage employment.
2. Skill development through 587 Rural Self Employment and Training Institutes (RSETI) in the country, which provides skilling, thereby enabling the trainee to take bank credit and start his/her own Micro-enterprise.

### What

1. The Ministry on 7 June 2017 celebrated **4th RSETI Diwas in recognition of outstanding performance of RSETIs in various states**.
2. A total of 88 awards were given for the years 2014-15 and 2015-16 to best performing States, lead Banks administering RSETIs and Directors of RSETIs.
3. Top performing States in different categories include Jharkhand, Karnataka, Andhra Pradesh, Odisha and Chhattisgarh. Amongst Banks the top performers are State Bank of India, Canara Bank, Syndicate Bank, ICICI and Andhra Bank.
4. Top performing RSETIs include training institutes of SBI Vijayanagaram, SBI Vishakapatnam, PNB Gaya, Canara Bank Haliyal and Davangere, Syndicate Bank Manipal and Meerut, Andhra Bank Srikakulam, ICICI Jodhpur and Udaipur, and RUDSETI Ananthapur and Bijapur.
5. **At present 587 RSETIs are functioning in the Country**, covering 32 States/UTs with the participation of 37 Sponsor Banks. Over 22 Lakh unemployed youth have been trained by RSETIs and 13 Lakh of them are engaged in self-employment. Of this credit linkage has been provided to nearly 6 lakhs candidates.
6. **RSETIs have aligned their curriculum with Common Norms for skill development courses**. It offers skilling in 56 NSQF aligned courses specially designed for entrepreneurship development.
7. **The 4th RSETI Diwas celebration was chaired by Shri Narendra Singh Tomar**, Union Minister, Rural Development, Panchayati Raj, Drinking Water and Sanitation. He emphasised the need for increase in rural entrepreneurship for sustainable livelihoods. He also emphasised on how rural livelihoods playing a strategic role in development of the rural clusters. To carry forward this momentum he appealed to the Banks to give their cooperation.

### SC upholds Aadhaar link with PAN

The Supreme Court on 9 June 2017 ruled that it would be **mandatory for Aadhaar holders to link Aadhaar with their permanent account number (PAN) for filing income tax returns (ITRs)**. The Supreme Court also said that an assessee who does not possess Aadhaar will not face criminal consequences for not linking PAN with Aadhaar. **The Finance Act 2017** has also made it mandatory to quote your Aadhaar number while filing your income tax return with effect from 1 July 2017. However, many were finding it difficult to link Aadhaar with PAN, due to mismatching details on these two documents.

### What

1. **The Finance Act 2017 makes it mandatory for individual taxpayers to quote their Aadhaar number while filing ITRs**.
2. The new rule will come into effect from 1 July 2017. Those who do not have an Aadhaar number can apply for one and use the enrolment number instead. However, it should be noted that the new rule also specifies certain categories of people who can file ITRs without an Aadhaar number.
3. The rule of mandatorily quoting Aadhaar number only applies to those who are eligible under the **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act 2016 to procure an Aadhaar number**.
4. As per the Aadhaar Act, only a resident individual is entitled to obtain it. Residents, as per the said act, are individuals who have resided in India for a

period or periods amounting to 182 days or more in the 12 months immediately before the date of application for Aadhaar enrolment.

5. Accordingly, the requirement to quote Aadhaar, **as per section 139AA of the Income-Tax Act**, shall not apply to individuals who are not residents, as defined in the act. Apart from non-residents, individual assessee residing in the states of Assam, Jammu and Kashmir and Meghalaya are also exempt from quoting Aadhaar.

### World's first clean energy city

**India aims to make Varanasi the first fully renewable energy powered city in the world**, ahead of the German city of Munich, which is working towards reaching the goal by 2025. Piyush Goyal, minister for power, mines, coal and new and renewable energy, **has instructed officials to start building the required infrastructure for the project**, including the power storage and distribution network.

#### What

1. **The project reinforces India's clean-energy ambitions** and sends a strong signal to the rest of the world about its commitment to climate-change goals.
2. In the wake of US President Donald Trump's decision to withdraw from the Paris climate change deal, which was agreed to by **more than 190 nations**, on grounds that it unfairly benefits countries like India and China.
3. Goyal met Christoph Beier, vice chairman of German development agency GIZ (German Federal Enterprise for International Cooperation), and proposed a partnership with India's Energy Efficiency Services Ltd (EESL).

## INTERNATIONAL

### WHO expands list of essential medicines

**The World Health Organisation has added 30 new medicines for adults and 25 for children to the list of essential medicines**, bringing the total number of such drugs to **433**. Of the 30 new medicines for adults and 25 for kids, **10 and 12 respectively are antibiotics**. It also introduced categorisation of antibiotics to reduce the growing health threat of antibiotic resistance.

#### What

1. **The list is used by many countries to increase access to medicines** and guide decisions about which products they ensure are available for their populations. India has its own **national list of essential medicine (NLEM)**, which includes **376 drugs**.
2. The biggest revision, in the WHO essential medicine list's 40 year history, happened in the antibiotics section following the global recognition of drug resistance as the emerging public health threat.
3. The rise in antibiotic resistance stems from how we are using and misusing these medicines.
4. The new list should help the health system planners to ensure that people who need antibiotics have access to them, and they get the right one so that the problem of resistance doesn't get worse.
5. The anti-microbial medicines have been grouped into three categories — **access, watch and reserve** — with recommendations on when each category should be used.
6. Initially, **the new categories apply only to antibiotics used to treat 21 of the most common general infections**. If shown to be useful, it could be broadened in future versions of the essential medicine list to apply to drugs to treat other infections.
7. The model list of essential medicines has a sharp focus on preserving anti-microbials. This list serves as a guide for the medicine supply system and is responsible for promoting health equity.

### Action to protect oceans

The **193 U.N. member nations** issued an urgent call for action to **reverse the decline in the health and productivity of the world's oceans** with the United States backing the action plan but rejecting its support for the **Paris agreement to tackle climate change**. Ministers and diplomats burst into applause as the final document was given approval by consensus at the end of the **first-ever U.N. conference on oceans**.

#### What

1. It recognizes the critical importance of the world's seas to the future of the planet: **Covering three-quarter of the Earth**, they supply nearly half the oxygen that we breathe, absorb over a quarter of the carbon dioxide we produce, provide food, and play key roles in water cycles and the climate system.
2. The government leaders called on people and organizations everywhere to take action to reverse the threats from plastic garbage, illegal and excessive fishing, rising sea levels that could wipe out small islands, and increasing acidity of ocean water that is killing marine life.
3. **The call for action, while not legally binding**, urges all "stakeholders" to take a series of urgent actions to heal the oceans.
4. These include reducing the use of plastics and invisible micro-plastics such as plastic bags and containers that are discarded after a single use, developing and implementing measures to reduce acidification of the oceans, and combating rising sea levels and increasing ocean temperatures.
5. **A 2016 World Economic Forum report** said the best research estimates there are over 150 million tons of plastics in the ocean. "In a business-as-usual scenario, the ocean is expected to contain 1 ton of plastic for every 3 tons of fish by 2025, and by 2050, more plastics than fish (by weight).

### Ireland's New prime minister

**Leo Varadkar** was elected **Irish Prime Minister** on 14 June 2017, making the **38-year-old son of an Indian immigrant the once-staunchly Catholic country's first gay premier** and the youngest person to hold the office. Despite inheriting Europe's fastest-growing economy, he will face immediate challenges in the shape of neighbouring Britain's exit from the European Union, a political crisis in Northern Ireland and a housing crisis at home.

#### What

1. **Varadkar succeeded Enda Kenny** earlier this month as leader of the governing Fine Gael party, with colleagues pinning their hopes of an unprecedented third term on the straight talking Varadkar, who they believe can widen their appeal in elections that may be triggered as soon as next year.
2. **Varadkar's elevation marks another chapter in the social change** that has swept through the country of 4.6 million people that only decriminalised homosexuality in 1993 and legalised divorce two years later.

### Russia signs deal for two nuclear plants

India and Russia on 1 June 2017 concluded a **much-awaited pact for setting up the last two units of the Kudankulam nuclear power plant** with Moscow's help in Tamil Nadu after overcoming initial hurdles to finalise the strategic deal. **The General Framework Agreement (GFA) and Credit protocol for Units 5 and 6 of the Kudankulam nuclear plant** are seen as a major outcome of the annual summit talks between Prime Minister Narendra Modi and Russian President Vladimir Putin.

#### What

1. **The reactors will be built by India's Nuclear Power Corporation of India Ltd (NPCIL) and Russia's Atomstroyexport company**, a subsidiary of Rosatom, the regulatory body of the Russian nuclear complex. Each of the two units will have a capacity to produce 1,000 MW of power.
2. The document titled '**A vision for the 21st Century**' said economies of India and Russia complement each other in the energy sector and both countries will strive to build an "energy bridge".

3. It said the future of Indian-Russian cooperation holds great promise across a wide spectrum covering nuclear power, nuclear fuel cycle and nuclear science and technology.
4. India and Russia commit themselves to earnestly implement the "**Programme of Action for Localisation in India**" signed on December 24, 2015, and to encourage their nuclear industries to engage closely and foster concrete collaborations.
5. The current nuclear power generation capacity of **all 22 nuclear power reactors is 6780 MW**.

#### One Million Dollar Fund established

The **Brazil-Russia-India-China-South Africa (BRICS)** grouping has established a **one million dollar fund** for boosting media cooperation in the five-nation grouping. During the inaugural session of the BRICS Media Forum held in Beijing. The BRICS media forum is a joint initiative of Xinhua News Agency, Brazil's CMA Group, Russia's Sputnik News Agency and Radio, The Hindu group of publications from India, and South Africa's Independent Media. BRICS Media is aimed at promoting six objectives including balanced reporting.

#### What

1. It aims **to create an alternative media narrative distinct from the media of western nations**.
2. The proposal is also aimed at joint development of BRICS digital media, financial information services and promoting people-to-people contacts.

#### Gulf nation's conflict

**Saudi Arabia, Egypt, Bahrain and the United Arab Emirates** announced on 6 June 2017 they were **severing diplomatic ties with Qatar**, as they accused the Gulf state of supporting terrorism.

#### What

1. **Saudi Arabia had decided to sever diplomatic and consular relations with Qatar** "proceeding from the exercise of its sovereign right guaranteed by international law and the protection of national security from the dangers of terrorism and extremism".
2. The "decisive" measure was due to the "gross violations committed by authorities in Qatar over the past years".
3. Egypt's foreign ministry also accused Doha of supporting "terrorism".
4. The statement said all Egyptian ports and airports would be closed to Qatari vessels.
5. Bahrain news agency said the tiny kingdom was cutting ties with Doha over its insistence on "shaking the security and stability of Bahrain and meddling in its affairs".
6. The Saudi-led Arab coalition in Yemen's two-year war also said it had expelled Qatar.

#### India, Lanka sign pact for line of credit

India on 6 June 2017 **signed an agreement with Sri Lanka to provide USD 318 million as line of credit** to develop the **island nation's railway sector**. The agreement was

#### About BRICS

1. It is the **acronym for an association of five major emerging national economies**: Brazil, Russia, India, China and South Africa.
2. **It was established in 2009**. The BRIC [Brazil, Russia, India and China] idea was first conceived by Jim O'Neill of Goldman Sachs.
3. In 2011, **South Africa joined this informal group and BRIC became BRICS**.
4. So far, **eight BRICS summits have taken place**.
5. The first formal summit was held in Yekaterinburg, Russia.
6. The BRICS members are all developing or newly industrialised countries and all five are G-20 members.
7. They are distinguished by their large, fast-growing economies and significant influence on regional and global affairs.

signed by RHS Samaratunga, Secretary, Ministry of Finance and Mass media, and David Rasquinha, Managing Director of India's Export-Import Bank in Colombo. During his first visit to Sri Lanka as prime minister in 2015, Narendra Modi had declared a **line of credit of USD 318 million for the development of Sri Lanka's railway sector**. That visit, **the first standalone bilateral visit by an Indian prime minister since 1987**, had come in the backdrop of increasing Chinese presence in the Indian Ocean nation.

#### What

1. China has been investing heavily in Sri Lanka, developing mainly ports that could potentially be used as a base for its navy, though Beijing says the investments are part of its Belt and Road Initiative that aims to link it with Europe and Africa via the Indian Ocean.
2. **India has provided four lines of credit to Sri Lanka to develop its railway sector**, amounting to USD 966 million.
3. These credit facilities have been utilised to improve the southern and northern railway lines and for the procurement of rolling stocks for the Sri Lanka Railways.
4. Sri Lanka's Ministry of Transport has said improving passenger transportation facilities is urgently required to attract passengers towards railways which is cost-effective.
5. **India has been Sri Lanka's major development partner in the South Asian region for more than 40 years**. Over the past years Indian foreign direct investment in Sri Lanka has expanded considerably.
6. Presently Indian development assistance mainly focuses on improvement of infrastructure, livelihood development, education, healthcare, and capacity building.

#### China's first X-ray space telescope

China successfully launched on 15 June 2017 its **first X-ray space telescope to study black holes, pulsars and gamma-ray bursts**. A Long March-4B rocket carried the 2.5-tonne telescope into orbit from the Jiuquan Satellite Launch Center in northwest China's Gobi Desert.

#### What

1. The **Hard X-ray Modulation Telescope (HXMT), named Insight**, will allow Chinese scientists to observe magnetic fields and the interiors of pulsars and better understand the evolution of black holes.
2. It will also help scientists search for gamma-ray bursts corresponding to gravitational waves and study how pulsars can be used for spacecraft navigation.
3. Insight is expected to push forward the development of space astronomy and **improve space X-ray detection technology in China**.
4. Beijing sees its multi-billion-dollar space programme as a symbol of its rise and of the Communist Party's success in turning around the fortunes of the once poverty-stricken nation.
5. In April, **China's first cargo spacecraft successfully docked with an orbiting space lab** - a key development toward China's goal of having its own crewed space station by 2022.
6. Last month, **China opened a "Lunar Palace" laboratory on Earth** to simulate a moon-like environment and house students for up to 200 days as the country prepares for its long-term goal of sending humans to the natural satellite.

#### Duma moves to end anonymity on messenger apps

The **Duma's Information and Technology Committee** has approved controversial draft legislation that **would ban anonymity on online messengers**. The Duma committee recommends the draft law for consideration of its first reading, after which the bill would return to committee for any necessary amendments. **The Parliament has not yet set a date for a vote on the law's first reading**. If passed and signed by President Putin, the law would take effect at the beginning of 2018.

### What

1. **Duma deputies introduced the legislation on May 24.** The law would require messenger users to verify their identities using their phone numbers, requiring mobile phone operators to assist the government with this effort.
2. The law also **proposes a fine against any messenger apps** that continue to permit communication between anonymous users, and any services that ignore police requests to cut access to specific anonymous accounts could be blocked by Russia's state censor.
3. If adopted, **the law would only apply to messengers** formally registered with the government as "information distributors.
4. Popular apps like **WhatsApp and Telegram aren't currently on the state's registry**, but officials have indicated that this could change soon.
5. If formally registered in Russia, the new ban on messenger anonymity would likely disrupt a cottage industry of political commentary, where dozens of anonymous accounts on messenger apps have recently gained popularity.

## ECONOMY

### GST Council clears rules

**The GST Council on 3 June 2017 cleared the pending rules**, including transition provisions and returns, with all the states agreeing to 1 July roll out of the Goods and Services Tax. The GST Council had last month fitted **over 1,200 goods and 500 services in the tax brackets of 5, 12, 18 and 28%**.

### What

1. Finance minister Arun Jaitley **chaired the 15th meeting of the GST Council** which is scheduled to **decide on tax rate of 6 items** including gold, textiles and footwear.
2. All states agreeing to the 1 July rollout assumes significance except West Bengal will not roll out the new indirect tax regime in its present form.
3. As for the transition rules approved by Council, **the industry had been demanding some relaxation of the provision of deemed credit.**
4. The draft transition law provided that once GST is implemented a company can claim credit of up to 40% of their Central GST dues for excise duty paid on stock held by businesses prior to the rollout.
5. Several dealers are choosing to wait and watch rather than buy and hold on to inventories. They have lobbied with the government seeking an increase in the credit limit.
6. In its meeting of Goods and Services Tax Council, **the fitment rates of many commodities were fixed.**
7. **The rate for gold was fixed at 3 percent, footwear below Rupees 500 and above Rs. 500 fixed at 5 and 18 percent** respectively.
8. **The bidi's rate for sales was fixed at 28 percent as per consensus.**
9. **Cotton yarn and textiles have been taxed at 5 per cent**, while readymade garments will attract 12 per cent. Similarly, Biscuits will be charged at 18 percent.
10. The fitment of 1,211 items was decided at the Council's previous meeting held last month in Srinagar.

### Anti-abuse provision in the Finance Act 2017

**The Central Board of Direct Taxes (CBDT)** on 6 June 2017 notified a series of exemptions to the **anti-abuse provision introduced in the Finance Act 2017** to curtail money laundering through securities transactions. The provision was aimed at **preventing the misuse of long-term capital gains (LTCG) tax exemption** through such transactions. Relief given to genuine transactions is based on suggestions received after the CBDT, the apex direct tax policy making body, brought out a draft notification in April.

### What

1. The announcement says the **bona fide acquisition of securities on which the securities transaction tax (STT)** is not paid, including employee stock options (ESOPs), foreign direct investment and court-approved transactions, will be exempt from LTCG tax.
2. The **amendments in the Income Tax Act this year** to deny the LTCG exemption in all cases where STT is not paid, except the notified ones.
3. The move was prompted by a recommendation by a Supreme Court-appointed special investigation team on black money that had highlighted the use of penny stocks in money laundering by inflating their price through market manipulation.
4. When a listed firm's shares are acquired outside the stock exchange and STT is not paid, **LTCG tax is chargeable**, except in cases such as acquisition of ESOPs, acquisitions as part of the government's disinvestment programme and purchase of shares by non-residents in line with the foreign direct investment policy.
5. Where an off-market transaction is approved by the Supreme Court, **the National Company Law Tribunal (NCLT)**, the Securities and Exchange Board of India (Sebi) or the Reserve Bank of India (RBI), the LTCG exemption is available even if STT is not paid. Investors prefer off-market purchases to avoid influencing the stock market.

### India signs multilateral instrument

**India has signed a ground-breaking multilateral BEPS convention** that will close loopholes in thousands of tax treaties worldwide. The multilateral instrument was signed by Finance Minister Arun Jaitley at the OECD headquarters in Paris. The OECD multilateral convention **aims to crack down on tax evasion around the world**, be it companies or investors, anybody trying to create a structure primarily to avoid or evade taxes.

### What

1. **The convention will modify India's treaties to curb revenue loss through treaty abuse and BEPS (Base Erosion and Profit Shifting) strategies** by ensuring that profits are taxed where substantive economic activities generating the profits are carried out.
2. It will swiftly implement a series of tax treaty measures to update the existing network of bilateral treaties and reduce opportunities for tax avoidance by multinational enterprises.
3. Resolving treaty rows
4. **It will strengthen provisions to resolve treaty disputes**, including mandatory binding arbitration, thereby reducing double taxation and increasing tax certainty.
5. The new convention was developed through negotiations involving more than 100 countries and jurisdictions, under a mandate delivered by G20 Finance Ministers and Central Beyond saving signatories from the burden of re-negotiating these treaties bilaterally, the new convention will result in more certainty and predictability for businesses, and a better functioning international tax system "for the benefit of our citizens", according to Gurria.
6. **The OECD/G20 BEPS project delivers solutions** for governments to close the gaps in existing international rules that allow corporate profits to "disappear" or be artificially shifted to low- or no-tax environments, where companies have little or no economic activity.
7. **Base erosion and profit shifting (BEPS) refers to tax avoidance strategies** that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations.
8. Under the inclusive framework, **over 100 countries and jurisdictions are collaborating to implement the BEPS measures and tackle BEPS.**

### GST Council reduces tax on 66 items

The GST Council on 11 June 2017 decided to **revise tax rates on 66 products** and widened the scope of a concessional tax payment scheme for small businesses and restaurants. Accordingly, tax rates on cashew and packaged food items such as pickle, instant food mixes and sauces will fall. **Taxes on school bags, insulin, cutlery, ball bearings and computer printers were also lowered** from the levels decided at the council's meeting held in Srinagar in May.

#### What

1. The council went an **extra mile to lower the tax burden on many of these items even below the level of tax burden on them currently**, taking into account changing consumption patterns and economic realities. The council had received proposals seeking relief on 133 items.
2. **The GST rate on hybrid cars will not be reviewed.** The environment-friendly hybrid cars will attract a 15% cess over and above the 28% GST rate, the same rate levied on large luxury cars and sport utility vehicles.
3. The scope of the composition scheme, a presumptive taxation scheme allowing small traders, **manufacturers and restaurants to pay a 1-5% GST rate on total sales without tax credits**, has been widened to include assesseees up to a **turnover of Rs75 lakh from the Rs50 lakh ceiling fixed earlier.**
4. This will allow more small businesses to avail of a hassle-free compliance regime. Under this scheme, eligible traders can pay a tax of 1% of sales, while manufacturers can pay 2% and restaurants 5%, the same rates set earlier. The scheme was expanded as these segments are large job creators, a priority area for the government.
5. The overall weighted average of all tax rates decided by the council is much lower than the rates people pay today, said Jaitley. Therefore, there will be an adverse revenue impact if other things remain equal.
6. Tax rate on job works was lowered to facilitate outsourcing of business activities. **Tax rate on movie tickets costing less than Rs100 is likely to come down.**
7. Tax rate on lottery services and the mechanism for checking profiteering among businesses during the transition period will be discussed at the next meeting.

#### Interest subsidy loans Extend

Farmers will continue to get **short-term loan of up to Rs 3 lakh at a subsidised interest rate of 7 per cent**, and prompt repayers will get it at **4 per cent** as the government was extended the subsidy to banks for 2017-18. The **Interest Subvention Scheme for 2017-18 has been approved in the Cabinet meeting**, headed by Prime Minister Narendra Modi.

#### What

1. **The Cabinet has approved the total expenditure of Rs 20,339 crore** in the current financial year as interest subsidy on short-term crop loans.
2. The short-term crop loan of up to Rs 3 lakh will continue to be made available to the prompt payee farmers at 4 per cent interest rate only.
3. As an interim measure, the Reserve Bank last month had asked the banks to continue giving the discount on interest on short-term crop loans during the current fiscal.
4. The Cabinet decision to continue the interest subvention comes at a time when there is farmers protest in several parts of the country, more particularly in Madhya Pradesh demanding farm loan waiver. Uttar Pradesh and Maharashtra have already announced such waiver.
5. Under the scheme, **a subvention of 2 per cent per annum is provided for short-term crop loan of up to Rs 3,00,000 per farmer**, provided the lending institutions make available short-term credit at the ground level at 7 per cent per annum to farmers.

6. An additional interest subvention of 3 per cent per annum is available to the "**prompt payee farmers**".
7. For 2017-18, the target of agriculture credit has been raised to Rs 10 lakh crore, from Rs 9 lakh crore in 2016-17.

### **New Bill with bankruptcy in financial sector**

The Union Cabinet on 14 June 2017 cleared a proposal to introduce a Bill in Parliament for setting up the **Resolution Corporation to deal with bankruptcy in banks, insurance companies and financial entities. The Financial Resolution and Deposit Insurance Bill, 2017**, which aims to instil discipline in financial service providers in the event of a financial crisis by limiting the use of public money to bail out distressed entities, was approved by the Union Cabinet chaired by Prime Minister Narendra Modi.

#### **What**

1. The proposed Bill will **provide for a comprehensive resolution framework to handle any bankruptcy situation** in banks, insurers and financial sector entities.
2. The Bill when enacted will pave the way for setting up of the Resolution Corporation.
3. It would also lead to **repeal or amendment of resolution-related provisions in sectoral Acts** as listed in Schedules of the Bill.
4. It will also result in the repealing of the **Deposit Insurance and Credit Guarantee Corporation Act, 1961**, to transfer the deposit insurance powers and responsibilities to the Resolution Corporation.
5. The Resolution Corporation would ensure the stability and resilience of the financial system, protecting the consumers of covered obligations up to a reasonable limit and public funds to the extent possible.
6. The government has recently enacted the **Insolvency and Bankruptcy Code, 2016, for the insolvency resolution of non- financial entities**.
7. The proposed Bill complements the Code by providing a resolution framework for the financial sector. Once implemented, this Bill together with the Code will **provide a comprehensive resolution framework for the economy**.
8. It seeks to give comfort to consumers of financial service providers during any financial distress.
9. It would help in maintaining financial stability in the economy by ensuring adequate preventive measures while at the same time providing necessary instruments for dealing with a post-crisis situation.
10. The Bill aims **to strengthen and streamline the current framework of deposit insurance for the benefit of a number of retail depositors**. Further, this Bill seeks to cut down the time and costs involved in resolving the problem of the distressed entities.

### **Panel set up to improve corporate governance**

**Securities and Exchange Board of India (Sebi)** has set up a committee **to help improve corporate governance of listed companies**, it said on 2 June 2017, in the light of recent high-profile corporate tussles. Apart from helping ensure the independence of independent directors, **the panel will also advise the market regulator on resolving issues** related to accounting, auditing and board's disclosure practices.

#### **What**

1. Recent high-profile corporate tussles, including the one between Tata conglomerate and former chairman Cyrus Mistry, put the focus on corporate governance in India and highlighted the need for better oversight and tighter regulation of company boards.
2. **Sebi Chairman Ajay Tyagi, having served as additional secretary in the finance ministry's economic affairs department since 2014** before taking the top job at the regulator earlier this year, was expected to focus on shoring up corporate governance norms.

- The committee, headed by Kotak Mahindra Bank Managing Director Uday Kotak, will also include members from the corporate world, stock exchanges, law firms, investors groups, academicians, and the market regulator itself.

## SCIENCE AND TECHNOLOGY

### LIGO detects gravitational waves for a third time

The **Laser Interferometer Gravitational-wave Observatory (LIGO)** said that it **had made another successful detection of gravitational waves**, ripples in space and time, from the merger of two massive black holes that happened three billion light years away. **The new detection occurred on January 4** this year during the ongoing second observing run of the Advanced LIGO detectors in the US, which began on November 30, 2016. **The third event was produced by the merger of two black holes, 31 and 19 times as massive as the Sun**, forming a larger black hole of about 49 solar masses.

#### What

- Data suggests that at least one of the black holes in this binary system** might have been spinning in a direction that is not completely aligned with the orbital rotation of the binary, providing potential clues on how these binaries might have formed.
- The new event also provides **new opportunities to test Einstein's theory of general relativity**.
- This allowed us to **confirm Einstein's prediction that gravitational waves should not undergo dispersion** — the phenomena of waves travelling at different speeds depending on their wavelength.
- Sixty-seven scientists from 13 Indian institutions are part of the LIGO Scientific Collaboration**, under the umbrella of the Indian Initiative in Gravitational-Wave Observations (IndIGO).

### First-ever mission to neutron-stars

**NASA has launched the world's first mission** on 3 June 2017 **to study rapidly spinning neutron stars** - the densest objects in the universe - nearly 50 years after they were discovered. The same platform will also carry out the **world's first demonstration of X-ray navigation in space**. The agency plans to launch the **two-in-one Neutron Star Interior Composition Explorer (NICER)** aboard SpaceX CRS-11, a cargo resupply mission to the International Space Station (ISS) to be launched aboard a Falcon 9 rocket.

#### What

- The mission focus especially on pulsars** - those neutron stars that appear to wink on and off because their spin sweeps beams of radiation past us, like a cosmic lighthouse.
- Due to their extreme nature, **neutron stars and pulsars have engendered a great deal of interest** since their existence was proposed in 1939 and then discovered in 1967.
- These objects are the remnants of massive stars that, after exhausting their nuclear fuel, exploded and collapsed into super-dense spheres.
- Their intense gravity crushes an astonishing amount of matter** - often more than 1.4 times the content of the Sun or at least 460,000 Earths - into city-sized orbs, creating stable, yet incredibly dense matter not seen anywhere else in the universe.
- Theory has advanced a host of models to describe the physics** governing the interiors of neutron stars. With NICER, we can finally test these theories with precise observations.
- Neutron stars emit radiation across the spectrum**, observing them in the energetic X-ray band offers the greatest insights into their structure and the high-energy phenomena that they host, including starquakes, thermonuclear explosions and the most powerful magnetic fields known in the cosmos.

### Molecular black hole created

Scientists, using the **world's most powerful X-ray laser**, have successfully created a **molecular black hole consisting of heavy atoms** that suck electrons from their neighbours. Researchers from Kansas State University in the US successfully used short pulses of ultra-intense high-energy X-rays to produce a detailed picture of how X-ray radiation interacts with molecules.

#### What

1. **This was the first time this kind of extreme light** has been used to break up molecules, and it may help understand the damages from X-ray radiation when it is used to take an X-ray picture.
2. The team shot iodomethane (CH<sub>3</sub>I) and iodobenzene (C<sub>6</sub>H<sub>5</sub>I) molecules with a powerful X-ray beam.
3. As **this powerful X-ray light hits a molecule**, the heaviest atom, the iodine, absorbs a few hundred times more X-rays than all the other atoms.
4. Then, most of its electrons are stripped away, creating a large positive charge on the iodine.
5. **The X-ray laser is the most powerful in the world** with an intensity of 100 quadrillion kilowatts per square centimetre.

## Miscellaneous

### QS Rankings 2018

**For the first time, three renowned Indian institutions** — the **Institute of Science (IISc) Bangalore** and the **IITs Delhi and Bombay**, have catapulted to the list of the top 200 global universities. This was revealed in the **latest QS World University Rankings 2018**. While IISc Bangalore has **climbed from 190 to 152 this year**, **IIT-Delhi moved from 172 to 185**, while **IIT-Bombay jumped from 219 to 179 this year** — or among the top 1% of approximately 26,000 universities surveyed globally. The improved ranking is a reflection of the continuous improvement of the quality of education and research at IIT-B.

#### What

1. **The Quacquarelli Symonds (QS) WUR**, a British agency, **rank higher educational institutes, compares top universities in the world** based on **six performance parameters** across for sectors like Research, Teaching, Employability and Internationalisation, plus a considerable 40 point weightage to the institute's stature.
2. The results, released on 8 June 2017 show IIT-B ranking second in India with an overall score of 49.7/100, 62/3 in academic reputation, 77/9 in employability, 50.8 in citation per faculty, 32.1 in faculty-student ratio, 3.7 in international faculty and 2 in international students.
3. Among all the parameters, Employer Reputation was the strongest for IIT-B with a 102 rank globally.
4. Considering there are around 26,000 universities worldwide, latest rankings have put IISc, IIT-D and IIT-B together among the top 1% universities globally.

### India reaches 15th spot in 4G availability

**India has reached 15th spot in the 4G availability globally**, a survey by London-based wireless coverage mapping company **OpenSignal revealed** on 7 June 2017. According to **OpenSignal's "State of LTE" report**, India had 71.6 per cent 4G availability in the third quarter of 2016 which jumped to 81.6 per cent in the first quarter of 2017.

#### What

1. **India is one of the most dynamic and fast-changing mobile markets**. The government and other stakeholders must continue to seize the immense

opportunity and climb the global rankings across all parameters, to ensure high quality and consistent mobile experience for its one billion plus mobile users.

2. **The 4G download speeds averaged 5.1 Mbps in the country**, dropping more than a megabit per second in just six months.
3. These 4G download speeds are only marginally faster than the average global 3G download speed which is at 4.4 Mbps," the findings showed.
4. Availability levels of other operators than Jio in the Indian market still hovered around 60 per cent.
5. **South Korea scored highest in 4G availability** and second highest in 4G download speed in tests.
6. For its report, OpenSignal collected data from regular consumer smartphones under conditions of normal usage and covered 75 countries.

### Two dimensional magnets exist

**2D monolayers alone offer exciting opportunities to study the drastic and precise electrical control of magnetic properties.** Scientists have for the **first time discovered two-dimensional magnets** that are formed by a single layer of atoms and may pave the way for more compact and efficient devices. Magnetic materials form the basis of technologies that play increasingly pivotal roles in our lives today, including sensing and hard-disk data storage.

### What

1. For smaller and faster devices, researchers are seeking new magnetic materials that are more compact, more efficient and can be controlled using precise, reliable methods.
2. A team led by the University of Washington (UW) and the Massachusetts Institute of Technology (MIT) in the US has for the **first time discovered magnetism in the 2D world of monolayers**, or materials that are formed by a single atomic layer.
3. The findings show that magnetic properties can exist even in the 2D realm – opening a world of potential applications.
4. Researchers have previously shown that **CrI3 – in its multilayered, 3D, bulk crystal form** – is ferromagnetic, that is, it has some magnetic properties. However, no 3D magnetic substance had previously retained its magnetic properties when thinned down to a single atomic sheet.
5. **To discover the properties of CrI3 in its 2D form**, the team simply used Scotch tape to shave a monolayer of CrI3 off the larger, 3D crystal form.
6. 2D monolayers alone offer exciting opportunities to study the drastic and precise electrical control of magnetic properties, which has been a challenge to realise using their 3D bulk crystals.

### India among top five consumer markets in Asia

**India is among the top five consumer markets in Asia**, offering retailers consumer spending growth of an average of 6.1% over the next five years, says a report. According to **BMI Research, a Fitch group company**, China, Sri Lanka, Vietnam, India and Indonesia represent five favourite consumer markets in Asia, offering retailers the strongest consumer spending growth over its forecast period to 2021.

### What

1. **Consumer spending in India will maintain strong levels of growth through to 2021**, as the country's positive economic outlook continues, real consumer spending growth is expected to see an average of 6.1% over this five-year period, with 2017 coming in at 6.2%.
2. Some of the key factors responsible for increase in consumer spending include **increasing access to consumer credit**, lower inflation, and a more favourable regulatory environment for foreign-owned retailers bodes well for India's consumer sectors over the coming years.

3. The report further said **India has a thriving e-commerce segment**, with online retail sales expected to continue growing at double-digit rates over the forecast period.
4. Due to limitations on the activity that overseas retailers are allowed to undertake, e-commerce has so far been dominated by local firms such as Flipkart and Snapdeal.
5. However, Amazon is making a real push into the market and recently announced \$500 million investment to roll-out online food retailing in India. Bricks-and-mortar retailers are also beginning to enter the e/m-commerce segment, due to the high mobile penetration in the country.

#### **Only Indian in Forbes highest paid athletes list**

**Indian cricket captain Virat Kohli** is the **sole sportsperson from the country to feature among the world's 100 highest paid athletes** in the latest Forbes list topped by soccer star Cristiano Ronaldo. **Kohli, 28, has been ranked 89th on the 2017 Forbes list** of 'The World's highest paid athletes' with a total pay of \$22 million, which includes \$3 million from salary and winnings and another \$19 million from endorsements. Describing Kohli as the "**Indian cricket phenom**", Forbes said the sports star has "for good reason" already drawn comparisons to all-time great Sachin Tendulkar.

#### **What**

1. **Kohli has continuously shattered batting records and in 2015** was named the captain of the Indian national team, making him one of the youngest players to ever hold the job.
2. It noted that last year, Kohli made nearly \$1 million in salary and match fees from his national team play, and he's also among the Indian Premier League's highest-paid players thanks to a \$2.3 million salary from Royal Challengers Bangalore.
3. **The list has been topped by Ronaldo with a total pay of \$93 million.** American basketball star LeBron James comes in at the second spot with \$86.2 million, followed by Argentine footballer Lionel Messi (3) with \$80 million, tennis star Roger Federer (4) with \$64 million and American basketball player Kevin Durant.
4. **The list of 100 has only one woman sports star.** Forbes noted that the top 100 athletes are a boys' club more than ever, with **tennis star Serena Williams**, who comes in at the 51 spot with \$27 million, the lone female athlete to make the cut this year.
5. The list also includes tennis greats Novak Djokovic (16) and Rafael Nadal (33), along with basketball player Anthony Davis (44) and soccer star Wayne Rooney (70).
6. The earnings figures **include salaries, prize money and bonuses earned between June 2016 and June 2017.**
7. Athletes from 21 countries are represented among the top 100, but Americans dominate the list with 63 entries thanks to soaring salaries in the professional Americans leagues like the National Basketball Association, National Football League and Major League Baseball.

#### **Petrol and diesel to revised every day**

**Petrol and diesel prices will be revised every day across the country from June 16**, according to an official statement from public sector oil marketing companies. The decision to extend the daily fuel price revision to the country was taken after a review meeting of the pilot project in five cities by the Ministry of Petroleum and Natural Gas.

#### **What**

1. Nationwide roll-out of daily revision of petrol and diesel prices at the June 16 deadline has been opposed by the petrol pump retailers.
2. This is not a good thing for retailers. The pilot project had faced numerous problems that were raised by the dealers to the oil marketing companies. The prices had to be changed manually in 95 per cent of the retail outlets every night.

3. **The pilot project was initiated in Puducherry, Visakhapatnam, Udaipur, Jamshedpur and Chandigarh from May 1.**
4. Under the daily revision exercise, the moving average of product price for the preceding 15 days with a lag of two days is taken into consideration for deciding the retail price.

### World Investment Report 2017

India improved its ranking by one notch to **9th position as one of the highest recipients of foreign direct investment (FDI) in 2016**, at a time global FDI flows fell, the UN trade and development agency said in its latest **World Investment Report 2017**. While the US remained the top host country for FDI in 2016 with \$391 billion inflows, and the UK saw an unprecedented rise from \$33 billion in 2015 to \$254 billion in 2016, inflows to India grew 1% to \$44.5 billion. A drop in inflows to France, which was at 9th position last year, improved India's ranking, according to the annual report by the **UN Conference on Trade and Development or Unctad**.

#### What

1. In a survey of top executives carried out by Unctad in early 2017, the economic situation in developing Asia ranked as the top macroeconomic factor influencing FDI, with the favourite FDI destinations remaining the US, China and India.
2. Following a record high in 2015, combined **FDI flows to developing Asian countries contracted by 15% to \$443 billion in 2016**.
3. The decline in inflows to the region was relatively widespread, with three of the four sub regions registering reductions. Only South Asia escaped the sharp decline, thanks to stable flows to India and a rise in flows to Pakistan.
4. **FDI outflows from South Asia declined by 29% to only \$6 billion in 2016**, as India's outward FDI dropped by about a third, from \$7.6 billion in 2015 to \$5.1 billion in 2016. The signing of a tax treaty by the Indian and Mauritian governments in May 2016 might have contributed to reduced round-tripping FDI.

### Indian companies more prone to cyber attack

**More than 60 per cent of the software used by companies in India is unregulated** which poses a threat of cyber attacks, according to business practices firm EY. As per data of **Indian Computer Emergency Response Team (CERT-In)**, over 50,300 cyber security incidents like phishing, website intrusions and defacements, virus and denial of service attacks were observed in the country during 2016.

#### What

1. Last month, over 100 countries were hit by **'WannaCry' ransomware** in one of the most widespread cyber attacks in history.
2. Over 49 per cent of chief information officers identified security threats from malware as a major threat posed by unlicensed software, while 26 per cent employees admitted to installing outside software on work computers.
3. **Middle market companies** are more concerned about running the business and may ignore peripheral matters including cyber security.
4. An organisation with stringent software asset management practices can operate a secure and cost effective IT environment.
5. Software asset management would address inadvertent downloads of malware through unauthorised software, or software of unknown vendors and use of removable media to download software that is not supported in a corporate environment.
6. It would also address issues like use of older versions of software, unauthorised connection of personal devices to corporate networks, among others.

### 1st Indian woman on UN law board

In a significant victory for India at the UN, **international law expert Neeru Chadha has won a crucial election to a top UN judicial body** that deals with disputes related to the **law of the sea**, becoming the **first Indian woman to be appointed as a judge at the tribunal**. Chadha, an eminent lawyer and the **first Indian woman to become the chief legal adviser in the ministry of external affairs**, won the election on 15 June

2017 to the **International Tribunal for the Law of the Sea (ITLOS)** for a nine-year term from 2017 to 2026.

#### What

1. **The Tribunal is composed of 21 independent members** who are elected from among persons enjoying the highest reputation for fairness and integrity and of recognised competence in the field of the law of the sea.
2. **The Hamburg-based ITLOS, established in 1996**, is one of dispute settlement mechanisms under the UN Convention on the Law of the Sea (UNCLOS) that entered into force in 1994.
3. Chadha has extensive international arbitration and litigation experience, having served as an agent for the Indian government in its maritime delimitation case with Bangladesh.
4. She was also **India's agent for the case filed by Italy in ITLOS involving two Italian marines accused of shooting two Indian fishermen off the coast of Kerala in 2012**.
5. Currently, eminent jurist from India P Chandrasekhara Rao is a judge at the tribunal. He was elected member of the tribunal in 1996 and his term will expire in September 2017.
6. **Chadha is only the second woman to be judge of ITLOS in its two decades of existence**, where there have been a total of 40 judges, the Permanent Mission of India to the UN said in a statement.
7. Chadha holds law degrees including PhD in law from the University of Delhi and the University of Michigan.

#### Investment spots in Asia-Pacific

**Six Indian cities** — including **Hyderabad, Bengaluru, Pune, Mumbai, Delhi and Chennai** — have found place in the top 10 emerging property investment destinations list for the Asia-Pacific. Most global investments this year will be made in commercial office assets. Markets in Bengaluru, Chennai, Delhi NCR, Hyderabad, Mumbai and Pune are well placed to outperform other **cities from emerging economies in the Asia-Pacific**, said a report titled **'Betting on Asia Pacific's next core cities,'** by property consultant Cushman & Wakefield.

#### What

1. Limited investment opportunities in safe haven core markets of Asia-Pacific have prompted investors to turn their attention to secondary and tertiary markets and even to non-core property types, said Cushman & Wakefield.
2. **The consultant used a proprietary tool, strategic location indicator and selected the next core and emerging markets in the region** that will offer investors the opportunity to tap into their long-term growth fundamentals, which will become increasingly viable due to sustained reforms.
3. **Asia-Pacific remains a very viable investment target for global capital.** After entering in 2005 to 2008 and having learnt many valuable lessons since, global investors are well equipped to take advantage of the potential that Indian real estate markets offer.

#### What's ahead in APAC?

1. **The Atlas Summary 2017' report**, real estate investment volume in the Asia-Pacific is expected to hit \$611 billion this year.
2. A total investment value of close to \$136 billion in the region in the first quarter of this year, a record quarter high, and is a good indicator of health of investment in real estate in the Asia Pacific region.
3. Pending any unforeseen circumstances in the months ahead, a positive momentum is expected to continue making a banner year for real estate investments in Asia Pacific.

4. The country is firmly on track to become an economic powerhouse, with strengthening GDP (gross domestic product), better business environment and investor-friendly policies.
5. Within APAC, **India is expected to continue contributing highly to the total office demand.** Consequently, global investors are increasing their capital outlays substantially as they are confident about the long-term prospects of the Indian economy in an environment of increasing transparency and accountability backed by policy reforms such as RERA, REITS, GST, Benami Transactions Act, etc.

### UNICEF report 2017

**One in five children in rich countries lives in relative poverty**, according to a UNICEF report published on 15 June 2017 that put the **US and New Zealand among the world's worst performers for youth well-being.** Nearly 13 per cent of children in those countries lack access to sufficient safe and nutritious food, the report said, with that number rising to 20 per cent in the US and UK.

#### What

1. **Higher incomes do not automatically lead to improved outcomes for all children**, and may indeed deepen inequalities," said Sarah Cook, director of the UNICEF Innocenti research office that published the study.
2. The 'Report Card' took into account factors like education, mental health, alcohol abuse, economic opportunities and the environment to rank **41 high-income countries for overall youth well-being.**
3. Germany and the Nordic countries topped the list while Romania, Bulgaria and Chile came in at the bottom, with New Zealand and the US in 34th and 37th place respectively.
4. The US had relatively low scores in terms of poverty, hunger, health, education and inequality.
5. New Zealand performed particularly badly in terms of adolescent mental health, with the highest suicide rate in the world for people aged 15 to 19 — almost three times the average for the countries surveyed.
6. The number of adolescents reporting mental health problems is increasing in the majority of the countries included in the study, along with the rate of obesity among young people.
7. Even in Japan and Finland, among the best-performing countries in the list, around a fifth of 15-year-olds do not reach baseline educational standards, the report said as it called for greater focus on disadvantaged groups.

### Pioneer of judicial activism passes away

**Former Chief Justice of India P N Bhagwati**, considered a pioneer of judicial activism in the country for **introducing the concept of PILs**, died in New Delhi on 15 June 2017 after a brief illness, family sources said. He was 95. Bhagwati is survived by his wife Prabhavati Bhagwati and three daughters.

#### What

1. **The 17th Chief Justice of India**, Bhagwati remained on the highest judicial post between July 1985 and December 1986.
2. He was a former Chief Justice of the Gujarat High Court and was appointed a judge of the Supreme Court in July 1973.
3. As a Supreme Court judge, **Bhagwati introduced the concepts of public interest litigation (PIL)** and absolute liability to the Indian judicial system.
4. As a champion of PILs, he had ruled there was no need for a person to have any locus standi (the right or capacity to bring an action or to appear in a court) to knock the doors of a court on the issue of fundamental rights.
5. He was also instrumental in furthering the cause of prisoners when he ruled that they too enjoyed fundamental rights.

6. **He was the lone dissenting judge in the Minerva Mill case who upheld the 42nd Constitution amendment during Emergency.** It was struck down by a majority verdict.
7. In the Minerva Mills case, the Supreme Court provided key clarifications on the interpretation of the basic structure doctrine.
8. The court had ruled that the power of Parliament to amend the Constitution is limited by the Constitution. Hence Parliament cannot exercise this limited power to grant itself unlimited power.

### THE World Reputation Rankings 2017

**Indian universities yet again missed a spot on the Times Higher Education (THE) World Reputation Rankings 2017.** The list is compiled through research insight, from leading academics across the world. **No Indian university made it to the top-100 list, which Harvard University topped.** Asian universities, however, improved their performance, with 28 of them on the list. Some Chinese institutions went ahead of several prestigious European counterparts.

#### What

1. **Massachusetts Institute of Technology (MIT) and Stanford University retained their second and third positions** that they had secured last year. Oxford and Cambridge came in a joint fourth.
2. University of California, Berkeley, Princeton University, Yale University, University of Chicago and California Institute of Technology followed, making up the top-10 list. Eight of these universities are in the US. Forty-two US universities are among the top 100.
3. **The Times Higher Education World Reputation Rankings are based on nothing more than subjective judgement** – but it is the considered judgement of senior, published academics, the people best placed to know the most about the world's universities.
4. Most global universities take conscious efforts to position themselves regarding who they are, why students should consider them or who have they hired.
5. This is something which Indian institutes have rarely done. Even for IITs. It happens more through their alumni network than anything that they have proactively done.

### 'One Family at a Time' studies by UN

**Indians working across the globe sent home USD 62.7 billion last year, making India the top remittance-receiving country surpassing China,** according to a UN report.

The 'One Family at a Time' study by the **UN International Fund for Agricultural Development (IFAD)** said about 200 million migrants globally sent more than USD 445 million in 2016 as remittances to their families, helping to lift millions out of poverty. Remittance flows have grown over the last decade at a rate averaging 4.2 per cent annually, from USD 296 billion in 2007 to USD 445 billion in 2016.

#### What

1. **The study is the first-ever of a 10-year trend in migration and remittance flows over the period 2007-2016.** It said 80 per cent of remittances are received by 23 countries, led by India, China, the Philippines, Mexico and Pakistan.
2. The top 10 sending countries account for almost half of annual flows, led by the US, Saudi Arabia and Russia.
3. India was the top receiving country for remittances in 2016 at USD 62.7 billion, followed by China (USD 61 billion), the Philippines (USD 30 billion) and Pakistan (USD 20 billion).
4. In the decade between 2007 and 2016, India surpassed China to become the top receiving country for remittances. In 2007, India was on the second spot, behind China, with USD 37.2 billion in remittances as compared to USD 38.4 billion for China.

5. **Asia is the highest originating region with 77 million migrants;** with 48 million remaining within the region. Over the past decade, remittances to Asia and the Pacific increased by 87 per cent, reaching USD 244 billion, while migration grew by only 33 per cent in comparison.
6. Currently, **about 200 million migrant workers support some 800 million family members globally.** In 2017, an expected one-in-seven people globally will be involved in either sending or receiving more than USD 450 billion in remittances, according to the report.
7. **Migration flows and remittances are having large-scale impacts on the global economy and political landscape.** Total migrant earnings are estimated at USD 3 trillion annually, approximately 85 per cent of which remains in the host countries.

### Global Innovation Index (GII) 2017

**India has moved up six places to 60th among 130 nations on the Global Innovation Index (GII) 2017,** emerging as the **top-ranked economy in Central and South Asia.** The improvement in India's rankings comes after five continuous years of slide even as **Switzerland, Sweden, the Netherlands, the US and UK** retained their top spots as the most-innovative countries.

#### What

1. The index, **co-authored by Cornell University, INSEAD and World Intellectual Property Organisation** shows India's rise as an emerging innovation centre in Asia, although the country ranks far behind China which occupied the 22nd spot.
2. The Task Force on Innovation had the mandate of assessing India's position as an innovative country, suggest measures to enhance the innovation ecosystem in India and thus improve India's ranking in the GII.
3. **Opportunities have emerged to leverage the rise of new East Asia Innovation Tigers,** fostering deeper regional innovation networks and benefiting from the rise of India, the report noted in its findings.
4. Among India's neighbours, **Sri Lanka took the 90th spot whereas Nepal was at 109th.** Pakistan came in at 113 followed by Bangladesh at 114.
5. As demonstrated in the GII for some years, India has consistently outperformed on innovation relative to its GDP per capita. Recently, it made important strides in innovation input and output performance.
6. It highlighted the continual improvement of India in terms of investment, tertiary education, quality of its publications and universities, its ICT services exports and innovation clusters.
7. In 2017, Switzerland leads the rankings for the seventh consecutive year, with high-income economies taking 24 of the top 25 spots, except China which in 2016, became the first- ever middle-income economy in the top 25.
8. **Each year, the GII surveys some 130 economies using dozens of metrics,** from patent filings to education spending, is providing decision makers a high-level look at the innovative activity that increasingly drives economic and social growth.

### Nadal wins 10th French Open

**Rafael Nadal coasted to a record 10th French Open title** on 11 June 2017, demolishing **Stan Wawrinka** in a brutally one-sided final which also earned the Spaniard a 15th Grand Slam crown. Nadal, 31, triumphed 6-2, 6-3, 6-1 to **become the first man in history to win the same major 10 times.**

#### What

1. Playing in his 22nd Grand Slam final, Nadal triumphed in Paris without dropping a set for a third time.
2. **He also lost just 35 games in total and only six in the final,** his most comprehensive victory since allowing Roger Federer four games in the 2008 final.

### Panama forges ties with China

**Panama established formal diplomatic ties with China and broke with Taiwan** in a major victory for Beijing that bolsters its claims of sovereignty over what it regards as a renegade island. Panamanian President Juan Carlos Varela said in a televised address Panama was upgrading its commercial ties with China and establishing full diplomatic links with the second most important customer of its key shipping canal.

#### What

1. It recognised there was only one China, with Taiwan belonging to the Asian giant, and that it was severing ties with Taipei. The Panamanian government is breaking its 'diplomatic ties' with Taiwan, and pledges to end all relations or official contact with Taiwan, the statement said.
2. The establishment of links with **Panama is a coup for China**, which has been showering largesse on countries throughout Central America in recent years in an attempt to get them to break ties with Taiwan.
3. As recently as December, Panama's deputy foreign minister had said he did not expect any change in Panama's relations with Taiwan or China.
4. **Panama is one of Taiwan's oldest friends**, but some diplomats in Beijing had speculated that the Central American country could become the next nation to break ties.
5. Earmarked at a cost of \$50 billion, the Nicaraguan scheme was met with widespread incredulity when it was announced in 2013, and critics have raised questions about its feasibility.

### Sachin to become part of the UN Campaign

**Sachin Tendulkar** will join other global celebrities like **Dravid, Beckham, Novak Djokovic**, Academy Award winning American actor Mahershala Ali, British Formula One racing driver Lewis Hamilton and Australian actor Hugh Jackman for UNICEF's 'Super Dads' campaign that highlights the critical role played by fathers in children's early development. The initiative is **aimed at celebrating fatherhood** and highlights **the importance of love, play, protection and good nutrition** for the healthy development of the brains of the young children.

#### What

1. The **'Super Dads' initiative is a part of UNICEF's #EarlyMomentsMatter campaign** that aims to increase understanding of how a child's environments and experiences in early childhood can shape their future health, well being, ability to learn etc.
2. **UNICEF was established in 1946 by the United Nations** to protect the children struggling to survive in the aftermath of World War II.
3. UNICEF works to promote the rights and well-being of children and works in around 190 countries and territories to translate that commitment into practical action.

### First Indian to be inducted in ITTF URC

**Ganeshan Neelakanta Iyer** has become the first Indian to be nominated as a member of the **Umpires and Referees Committee (URC)** by **International Table Tennis Federation (ITTF)**. He will serve for a term of two years which is further extendable. In another first Ganeshan Neelakanta Iyer has also been recommended as the Technical Commissioner from Asia to the ITTF. His will serve in this capacity for a period of four years.

#### What

1. Ganesan already serves as the **chairman of the South Asian Federation technical committee** and also as a member of the Technical Committee of the Commonwealth Table Tennis Federation.
2. He also recently supervised the Asian Championships at Wuxi (China) as the competition manager.
3. He had served as a deputy referee in the Kuala Lumpur World Championships 2016 and has officiated in various International competitions as Competition Manager and Referee like that of the Commonwealth Games at Glasgow.

### Vijay Mallya gets bail in extradition case

**Vijay Mallya, the embattled tycoon who is wanted in India on loan defaults to several banks**, claimed that he has “enough evidence” to plead his case as a UK court **granted him bail until 4 December**. The 61-year-old former chief of erstwhile Kingfisher Airlines appeared before Westminster Magistrates Court for his extradition case hearing. **Chief Magistrate Emma Louise Arbuthnot granted bail to Mallya until 4 December**. The next hearing has been set for 6 July.

#### What

1. **Britain’s Crown Prosecution Service (CPS)** presented the case in court on behalf of the Indian authorities.
2. The CPS had met a joint team of **Central Bureau of Investigation (CBI)** and **Enforcement Directorate (ED)** officials in London last month to thrash out details of the case.
3. Earlier, he had caused a stir by his attendance of the India vs Pakistan match in Birmingham after which he had declared on Twitter that he would be attending all India matches in the ongoing ICC Champions Trophy.
4. Mallya, who is wanted in India for Kingfisher Airlines’ default on loans worth nearly Rs9,000 crore, has been in the UK since March 2016 and was arrested by Scotland Yard on an extradition warrant on 18 April.
5. **An initial case management hearing date of May 17 had been postponed to 13 June**. If the District Judge rules in favour of extradition at the end of the trial, the UK home secretary must order Mallya’s extradition within two months of the appropriate day.
6. **India and the UK have an Extradition Treaty, signed in 1992**, but so far only one extradition has taken place under the arrangement—Samirbhai Vinubhai Patel, who was sent back to India last October to face trial in connection with his involvement in the post-Godhra riots of 2002. However, unlike Mallya, he had submitted to the extradition order without legal challenge.

### 40th Prime Minister of Nepal

**Sher Bahadur Deuba 70 has been elected as Nepal’s Prime Minister for the fourth time**. He was the only candidate who contested in the election as the main opposition party UML decided to end the obstruction of parliament and did not register its candidates for the election.

#### What

1. **Sher Bahadur Deuba has become the 40th Prime Minister of Nepal**.
2. Last month, Maoist leader **Prachanda Kamal Dahal** resigned under a power sharing deal with the Nepali Congress leader.
3. The CPN-UML decided to end the obstruction of parliament after the ruling parties agreed to hold local elections in the remaining provinces on June 28 as well as the provincial and parliamentary elections by January, 2018.

### World’s First Hybrid ‘Aeroboat’

The **world’s first hybrid ‘aeroboat’** which has been built by an **Indo-Russian joint venture** has been unveiled at a start-ups event organized by Russia’s state-run Skolkovo Foundation.

#### What

1. The **aeroboat is capable of travelling on land, water, snow and sand**.
2. It has been designed to access difficult terrain, such as flooded or marshy areas in which the regular boats cannot play because of shallow water, patches of dry land or by marine vegetation.
3. The aeroboats can handle steep slopes and embankments without the requirement of marine infrastructure such as jetties.
4. The **aeroboat will have a room for 10 passengers and one crew member**.
5. The aeroboat has been designed by IIAAT Holding.

6. IIAAT Holding is a joint venture between the International Institute for Advanced Aerospace Technologies and Indian firm Millennium Aerodynamics.
7. **Aeroboats are capable of moving at the speed of around 150 kmph** or more on water.

### The Forbes list 2017 of Celebrities

Indian superstars **Shahrukh Khan, Salman Khan and Akshay Kumar** are among Forbes' annual list of the highest-earning entertainers in the world. The Forbes list of the **'World's Highest-Paid Celebrities of 2017'** has been **topped by American rapper and entrepreneur Sean Combs**, known by his more famous stage name 'Diddy', with earnings of \$130 million.

#### What

1. **SRK, 51, ranks 65th on the list**, with earnings of \$38 million, tied with singer and actress Jennifer Lopez.
2. **Salman is on the 71st spot with \$37 million in earnings**, tied with English singer-songwriter Ed Sheeran.
3. **Akshay, 49 is ranked 80th on the list with earnings of \$35.5 million**, tied with musician Bon Jovi.
4. The list also includes American singer and icon Beyonce on the second spot with earnings of \$105 million.
5. Author **J K Rowling, with \$95 million, is at number three**. R&B musician Drake is at the number four spot with \$94 million.
6. Football star Cristiano Ronaldo (\$93 million) rounded out the top five.
7. The world's 100 highest-paid celebrities banked a cumulative \$5.15 billion during the June 2016 to June 2017 scoring period.
8. The 16 women on this year's list earned a cumulative \$822.5 million.

### Indian Girl Sahithi Pingali to get Planet Named

Sahithi Pingali, a **twelfth grader from Bengaluru will get a minor planet in Milky Way** named after her as a reward for developing an integrated mobile phone app and lake monitoring kit **to monitor pollution in water bodies**. Sahithi Pingali had presented her paper titled **"An Innovative Crowd sourcing Approach to Monitoring Freshwater Bodies"** at the Intel International Science and Engineering Fair (ISEF).

#### What

1. For her paper, **she got second position** and was presented **three special awards in the Earth and Environment Sciences category**.
2. In addition, she has also won a gold medal at the **International Sustainable World Engineering Energy Environment Project (ISWEEEP)** for her research work on Varthur Lake.
3. **Intel International Science and Engineering Fair (ISEF)** is considered as the largest pre-college scientific research event in the world.
4. ISEF has partnered with the Ceres Connection program of the Massachusetts Institute of Technology's Lincoln Laboratory which will identify a minor planet.
5. The planets are named after the budding scientists in order to motivate them by giving a name in space.

### World Environment Day

Every year **World Environment Day (WED) is observed on 5 June** to raise global awareness worldwide for the protection of our environment and the planet Earth. It is the **single largest celebration of our environment each year**. The celebration of World Environment Day is a **global initiative of United Nations Environment Programme (UNEP)**. The theme of this year is **Connecting People to Nature**.

#### What

1. According to the UN, the theme "implores us to get outdoors and into nature, to appreciate its beauty and its importance, and to take forward the call to protect the Earth that we share."

2. The Host Country of this year is Canada.
3. Since 1987, **World Environment Day has been hosted by different countries.**
4. The official celebration is held in that host country.
5. World Environment Day (WED) was established by the United Nations General Assembly to mark the opening of United Nations Conference on the **Human Environment in 1972.** The first World Environment Day was observed in 1973 and since then it is being held every year with different themes.

#### **'Project Jal Sanchay' Chosen for National Award**

**'Project Jal Sanchay', a water conservation model** which is successfully adopted in **Nalanda district of south-central Bihar**, has been chosen for the national award for excellence in the **Mahatma Gandhi national rural employment guarantee programme (MGNREGP)** by the Ministry of Rural Development. The award will be conferred on June 19 at a function held at Vigyan Bhawan in New Delhi.

#### **What**

1. Nalanda being an **agriculture-oriented district** remained affected by drought-like conditions that hampered the farming activities in the district.
2. The district receives flash floods during the monsoon; the water runoff in the district was very high so much so that the entire water got washed away in a span of 15 days.
3. Under these circumstances, **'project jal sanchay' was launched under Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP)** to offset the water crisis in the district.
4. Under the project, check dams and traditional **Aahar-Pyne irrigation systems** were created.
5. The project was a **mix of modern day techniques and technologies** with traditional knowledge and got evolved into a holistic program to conserve water.

#### **Protocol for Antibiotics revised**

With an aim to **curb antibiotic resistance**, the **World Health Organization (WHO)** has revised the protocol for antibiotics. This revision is the biggest such revision of the antibiotics section in the **40-year history of the essential medicines list (EML).**

#### **What**

1. WHO has divided the drugs into three categories — **access, watch and reserve.**
2. It has also specified which category of drugs is to be used for treating common ailments and which are to be used to treat complicated diseases.
3. As per the classification, commonly used antibiotics will be placed under the **'access' category.**
4. WHO has recommended that the antibiotics in this category be made available at all times as a treatment for a wide range of common infections.
5. The drugs that fall under this category include drugs such as amoxicillin which is widely-used for treating infections such as pneumonia.
6. Second line of antibiotics which are slightly potent will be placed under **'watch' category.** The highly potent drugs which should be used only as a last resort will be placed **under the 'reserve' category.**
7. WHO recommends that these drugs be used only when all other alternatives failed such as life-threatening infections caused by **multidrug-resistant bacteria.**

#### **About WHO**

1. The **World Health Organization (WHO)** is a specialized agency of the United Nations that acts as a coordinating authority on international public health.
2. It was established on **7 April 1948**, it succeeded the Health Organization, which was an agency of the League of Nations.
3. It is a member of the United Nations Development Group and its headquarters is located at Geneva.
4. WHO flag features the Rod of Asclepius as a symbol for healing

### First time survey on services sector

Aimed at **getting accounting data from service establishments on the lines of that provided by the manufacturing sector**, for the first time the Centre has started a survey on the services sector.

#### What

1. The service sector survey is being carried out to **validate the use of establishments as a basis for conducting regular survey on services**.
2. It will examine the availability of accounts which are used in the services survey, Union Minister for Statistics and Programme Implementation D V Sadananda Gowda said.
3. **The survey would examine whether services establishments were able to give us same kind of accounting data** which the manufacturing establishments give. The results will give a picture if it is sustainable.
4. The Ministry of **Statistics and Programme Implementation (MOSPI)** has also initiated an employment survey this year.
5. The survey will give quarterly data of the job sector in the urban areas and annual data from rural areas. The employment survey results will come by end of 2018.
6. A portal is being planned for online collection of data on industrial production for greater accuracy in assessing the economic activity.

### MGNREGA National Award

**The Ministry of Rural Development** has selected **Vizianagaram as one among the 17 districts for MGNREGA annual award**. The award will be given to Vizianagaram for its effective implementation of the **Mahatma Gandhi National Rural Employment Guarantee Act during the time period 2015-16**. The district programme coordinator and District Collector would be presented the award at the Mahatma Gandhi NREGA Sammelan to be held in New Delhi. The district has been chosen after the **field verification carried out by the selection committee**.

### Global IoT spending by 2021

**Worldwide spending on the internet of things (IoT) is set to grow 16.7% year-on-year**, reaching over \$800 billion in 2017 and nearly \$1.4 trillion by 2021, as organisations continue to invest in the **hardware, software, services and connectivity that enable IoT**, according to a forecast by market intelligence firm **International Data Corporation (IDC)**.

#### What

1. The **Asia-Pacific region, excluding Japan (APeJ)**, will be the IoT investment leader with spending expected to reach \$455 billion in 2021, **followed by the US** (\$421 billion in 2021) and **western Europe (\$274 billion)**.
2. Manufacturing will be the leading industry for IoT investments in all three regions, followed by utilities and transportation in APeJ and western Europe, and transportation and consumer in the US. Cross-Industry IoT spending will be among the leading categories in all three regions as well.
3. **The regions that will experience the fastest growth in IoT spending are Latin America** (21.7% compounded annual growth rate or CAGR), the Middle East and Africa (21.6% CAGR) and central and eastern Europe (21.2% CAGR).
4. **The true value of IoT is being realized when the software and services come together to enable the capture**, interpretation, and action on data produced by IoT endpoints," said Carrie MacGillivray, vice-president, internet of things and mobility at IDC.
5. The IoT use cases that are expected to attract the largest investments in 2017 include manufacturing operations (\$105 billion), freight monitoring (\$50 billion), and production asset management (\$45 billion).
6. **Smart grid technologies for electricity, gas and water and smart building technologies** are also forecast to see significant investments this year (\$56 billion and \$40 billion, respectively).

## CRY Report

According to a recently released **CRY Report on child labour**, more than 8 lakh children between the age group of 5 and 6 years in India are engaged in child labour. **Child Rights and You (CRY) is an NGO** that working towards the **upliftment of underprivileged children**. The organization got **established in 1979 by Rippan Kapur**.

### What

1. As per the report, **over 5 lakh children in India do not attend school**. A majority of them are involved in family based employments.
2. **Uttar Pradesh ranks first in the number of child labourers** (2, 50,672 children) in the country followed by Bihar (1, 28,087 children) and Maharashtra (82,847 children).
3. The report has identified that the **high level of poverty and unemployment** along with a lack of adequate social security net are the important factors forcing children to work, compromising with their learning.
4. The report cites that the **Integrated Child Development Scheme (ICDS)** suffers many limitations and is now covering only 50% of the child labourers.

### About ICDS

1. **Integrated Child Development Services (ICDS)** Scheme is a centrally sponsored scheme implemented by the states/UTs.
2. The Scheme was **launched on 2nd October 1975**.
3. Its objective **to improve the nutritional and health status of children in the age-group 0-6 years**; to reduce mortality, morbidity, malnutrition and school dropout; to promote policy coordination and implementation for promoting child development; to lay an adequate foundation for the psychological, physical and social well-being of the children etc.