My Notes....

NATIONAL

India's first World Heritage City

UN cultural agency Unesco declared the **600-year-old walled city of Ahmedabad as a world heritage city**, **the first Indian city to make it to the list**. The World Heritage Committee of Unesco met in Karlow, Poland on 8 July 2017 where the decision was made. Ahmedabad has just been declared India's first World Heritage city by Unesco, India's permanent representative to Unesco Ruchira Kamboj said.

What

1. With this title, **the Walled City of Ahmedabad has joined Paris, Vienna, Cairo, Brussels, Rome and Edinburgh**. Of the **287 world heritage cities across the globe**, the only two cities in the Indian subcontinent which enjoy the status are **Bhaktapur in Nepal** and **Galle in Sri Lanka**.

2. The committee also added Asmara, the capital of Eritrea, to its list of World Heritage sites. Earlier, it added **Hebron-Al Khalil Old Town (Palestine)** and **W-Arly-Pendjari Complex (Benin, Burkina Faso) to the list**. It also added the site of Hebron-Al Khalil to the list of World Heritage Sites in Danger.

3. The nomination of Ahmedabad was **supported by about 20 countries** including Turkey, Lebanon, Tunisia, Portugal, Peru, Croatia, Zimbabwe, Tanzania, South Korea, Croatia, Cuba and Poland.

Flashback

1. Ahmedabad's journey towards attaining a **world heritage tag began in 1984** when the first study for conserving heritage structures was instituted by Ford Foundation.
2. In March 2011, **Ahmedabad made it to Unesco's tentative list of world heritage sites**.
3. In January 2016, it was chosen over Delhi and Mumbai as India's entry for the title.
4. Ahmedabad has about **25 ASI (Archaeological Survey of India)-protected structures**, hundreds of 'pols'(housing clusters in the walled city areas of Ahmedabad) that capture the essence of community living, and numerous sites associated with Gandhi, who lived here from 1915 to 1930.

First-ever global treaty to ban nuclear weapon

Over **120 countries in the United Nations voted to adopt the first-ever global treaty to ban nuclear weapons**, even as **India and eight other nuclear-armed nations**, including the **US, China and Pakistan** did not participate in the negotiations for the legally binding instrument to prohibit atomic weapons. The Treaty on the Prohibition of Nuclear Weapons, **the first multilateral legally—binding instrument for nuclear disarmament to have been negotiated in 20 years**, was adopted amid cheers and applause by a vote of 122 in favour to one against (Netherlands) and one abstention (Singapore).

What

1. **India and other nuclear-armed nations** — the United States, Russia, Britain, China, France, Pakistan, North Korea and Israel had not participated in the negotiations.

2. A substantive session was held in March this year to negotiate the legally binding instrument aimed at prohibiting nuclear weapons.

3. In October last year, more than 120 nations had voted on a UN General Assembly resolution to convene a conference to negotiate the legally binding instrument to prohibit nuclear weapons, leading towards their total elimination.

4. **India had abstained from voting on that resolution**.

5. In its Explanation of Vote (EoV) given for its abstention on the resolution in October, India had said that it was "not convinced" that the proposed conference could address the longstanding expectation of the international community for a comprehensive instrument on nuclear disarmament.

6. India also maintained that the **Geneva-based Conference on Disarmament (CD) is the single multilateral disarmament negotiation forum**.

7. It had further said that it supports the commencement of negotiations in the Conference on Disarmament on a Comprehensive Nuclear Weapons Convention, which in addition to prohibition and elimination also includes verification.

8. Underlining that international verification was essential to the global elimination of nuclear weapons, India had said it feels that the current process did not include the verification aspect.

9. In line with its position that **India articulated in the EoV, the country had decided not to participate in the negotiations for the treaty**.

10. The treaty will be open for signature to all States at UN Headquarters in September and enter into force 90 days after it has been ratified by at least 50 countries.

11. A number of countries stayed out of the negotiations, including the United States, Russia and other nuclear—weapon States, as well as many of their allies.

12. The Democratic People's Republic of Korea (DPRK) did not join the talks either.

Flashpoint

1. Accession to the ban treaty is incompatible with the policy of nuclear deterrence, which has been essential to keeping the peace in **Europe and North Asia for over 70 years**.

2. The UN envoys of the three nations also criticised the treaty for not providing any solution to the "**grave threat posed by North Korea's nuclear programme**."

3. They said a purported ban on nuclear weapons that does not address the security concerns which continue to make nuclear deterrence necessary cannot result in the elimination of a single nuclear weapon and will not enhance any country's security, nor international peace and security.

4. **A ban treaty also risks undermining the existing international security architecture** which contributes to the maintenance of international peace and security.

5. The impetus for the treaty reflects growing concerns over the risk posed by the continued existence of nuclear weapons, as well as awareness of the catastrophic humanitarian consequences that would result if nuclear weapons were ever used again.

6. The treaty prohibits a full range of nuclear—weapon related activities, such as **undertaking to develop, test, produce, manufacture, acquire, possess or stockpile nuclear weapons** or other nuclear explosive devices, as well as the use or threat of use of these weapons.

7. **Opened for signature in 1968, the NPT entered into force in 1970**. Then in 1995, the Treaty was extended indefinitely.

8. A total of 191 states have joined the Treaty, including the five nuclear—weapon States that are the permanent members of the UN Security Council — China, France, Russia, the United Kingdom and the United States.

Digital initiatives for e-education launched

President Pranab Mukherjee was launched **four major digital initiatives** in to push **e-education**. They are **Swayam**, **Swayam Prabha**, **National Academic Depository** and **National Digital Library**. All these digital initiatives are operational under **Union Ministry of Human Resource and Development**.

What

1. **Swayam:** It an indigenously designed **massive open online course (MOOC)**, It will host all the courses, taught in classrooms from 9th class till post-graduation and can be accessed by anyone, anywhere at any time. It aims **to bridge the digital divide for students in e-education**.

2. **Swayam Prabha:** It will provide **high quality educational contents**, developed by experts, through **32 DTH (direct to home) Television Channels** with an aim to bring uniformity in standards of education. It will cover diverse disciplines of **all levels of education in various languages**. It will be available to all and will be having new content of 4 hours to be telecasted 6 times a day.

3. **National Academic Depository:** It is a digital depository of academic awards for **authenticating all certificates issued by institutions**. NAD will directly integrate with Boards/Universities which issue Certificates which will be verified, authenticated, accessed and retrieved in a digital depository for purpose of employment, higher education, and loans.

4. **National Digital Library:** It is a large online library containing 6.5 million books. It provides free access to many books in English and the Indian languages.

Mission Parivar Vikas launched

"**Mission Parivar Vikas** will focus on **146 high fertility districts in 7 states with high TFR**. Under this, **specific targeted initiatives shall be taken for population stabilisation through better services delivery**". This was stated by Shri J P Nadda, Union Minister of Health and Family Welfare at a function organised by **Jansankhya Sthirita Kosh (JSK)** to mark the World Population Day (11 July 2017).

What

1. **Mission Parivar Vikas is a new initiative conceived by the Ministry** with a strategic focus on improving access through provision of **services, promotional schemes, commodity security, capacity building, enabling environment and intensive monitoring**.

2. The Health Minister also advised the officials to undertake half yearly review of the programme and correlate the achievements with time to gauge whether the programme is moving in the right direction or not.

3. During the event, Shri J P Nadda **introduced the new injectable in the public health system under the "Antara" program** and launched a new software – **Family Planning Logistics Management Information System (FP-LMIS)** – designed to provide robust information on the demand and distribution of contraceptives to health facilities and ASHAs to strengthen supply chain management.

4. As a part of the new communications campaign linked to the rollout, the Health Minister also **launched a new consumer friendly website on family planning and a 52 week radio show for couples** to discuss issues related to marriage and family planning, which will be aired across the country.

5. He further highlighted the life cycle approach of the Ministry and stated that a continuum of care approach has been adopted by the Ministry with the articulation of 'Strategic approach to **Reproductive Maternal, Newborn, Child and Adolescent health (RMNCH+A)**, bringing focus on all the life stages.

6. Shri J P Nadda also gave away awards to the winners of the painting competition organised by Jansankhya Sthirita Kosh to create awareness regarding family stabilisation among young children.

"JIGYASA" launched

Jigyasa, a student- scientist connect programme was officially launched in the national capital. **Council of Scientific and Industrial Research (CSIR)**, has joined hands

with **Kendriya Vidyalaya Sangathan (KVS) to implement this programme**. The focus is on connecting school students and scientists so as to extend student's classroom learning with that of a very well planned research laboratory based learning.

What

1. **Memorandum of Understanding** signing ceremony was held in the presence of Dr. Harsh Vardhan, Minister of Science & Technology, Earth Sciences, Environment, Forests and Climate Change and Shri Prakash Javadekar, Minister of Human Resource Development.

2. **CSIR has been contributing for several decades for socio-economic development in the country**. It has been through development and deployment of knowledge base focused at Technology and Innovation. CSIR has also been playing a key role in human resource development, in particular training of the young researchers through Ph. D. programmes in diverse fields.

3. The "JIGYASA" would inculcate **the culture of inquisitiveness on one hand** and **scientific temper on the other**, amongst the school students and their teachers.

4. The Programme is expected **to connect 1151 Kendriya Vidyalayas with 38 National Laboratories of CSIR** targeting 100,000 students and nearly 1000 teachers annually.

The model of engagement includes:
1. Student Residential Programmes;
2. Scientists as Teachers and Teachers as Scientists;
3. Lab specific activities / Onsite Experiments;
4. Visits of Scientists to Schools/Outreach Programmes;
5. Science and Maths Clubs;
6. Popular Lecture Series/ demonstration programme at Schools;
7. Student Apprenticeship Programmes;
8. Science Exhibitions;
9. Projects of National Children's Science Congress;
10. Teacher Workshops
11. Tinkering Laboratories.

5. The program will also enable the students and teachers to practically live the theoretical concepts taught in science by visiting CSIR laboratories and by participating in mini-science projects.

6. **"JIGYASA" is one of the major initiative taken up by CSIR at national level**, during its Platinum Jubilee Celebration Year.

7. CSIR is widening and deepening its Scientific Social Responsibility further with the programme.

SDG index 2017

India has been ranked **low 116 out of 157 nations on the 2017 Sustainable Development Goal (SDG) Index** and Dashboard report released by Sustainable Development Solutions Network (SDSN) and Bertelsmann Stiftung. The index assesses the performance of countries towards achieving the ambitious SDGs. It ranks countries based on their performance across the **17 SDGs**.

About SDGs

1. The SDGs are the **set of 17 non-binding goals featuring 169 targets** to be implemented from 2015 to 2030.

2. They were adopted by member countries of United Nations at the 2015 UN Sustainable Development Summit held in New York.

3. These goals intend to achieve sustainable development and are more comprehensive than earlier **Millennium Development Goals (MDGs)**.

What

1. Top Countries in SDG Index 2017: Sweden (1st), Denmark (2nd), Finland (3rd), Norway (4th), Czech Republic (5th), Germany (6th), Austria (7th), Switzerland (8th) and Slovenia (9th).

2. **United States was ranked 42nd on the Index**, Russia and China ranked 62nd and 71st respectively.

3. India with a **score of 58.1 was ranked 116th on the index**, behind countries such as Nepal, Sri Lanka, Bhutan and China. Pakistan was ranked 122.
4. In 2016, **India was ranked 110th**.

First law to punish social boycott

President Pranab Mukherjee has given his assent to **Maharashtra Prohibition of People from Social Boycott (Prevention, Prohibition and Redressal) Bill, 2016**. Maharashtra is the **first state in the country to formulate a law to punish social boycott**. The presidential assent paves the way for the state to strictly enforce the law to deal with the scourge of social boycott with an iron hand.

What

1. The **purpose of new law is to root out oppression carried out in name of social boycott** by parallel justice delivery system (kangaroo court) by citing age old traditions, caste and religious practices.
2. The Bill terms **social boycott** as a crime and says anybody indulging in it would face imprisonment maximum upto 3 years and a fine of 1 lakh rupees or both.
3. It disallows social boycott of any individual or groups by caste panchayats or groups of individuals or gavki or by its members or by social or economically influential persons.
4. It will be tried by a **judicial magistrate of the first class**. The victim of social boycott or any member of the victim's family can file a complaint either to police or directly to the magistrate.
5. The Bill mandates state government to recruit social boycott prohibition officers to ensure monitoring and to detect offences and assist the magistrate and police officers in tackling such cases.

India's anti-hijacking law comes into force

The **country's new anti-hijacking law**, which **prescribes capital punishment in the event of death of "any person"**, has come into force following a government notification. **The 2016 Anti-Hijacking Act replaces a 1982-vintage law**, according to which hijackers could be tried only in the event of death of hostages, such as flight crew, passengers and security personnel.

What

1. In the new law, **the definition has been expanded to include death of "security personnel on board" or "ground support staff" as well**.
2. In other cases of hijacking, guilty will be punished with imprisonment for life and fine, besides confiscation of movable and immovable property held by him or her.
3. The new law, which has come into effect after its notification on July 5, includes several acts within the definition of hijacking including making a threat, attempts or abatement to commit the offence.
4. Those who organise or direct others to commit such offence will also be considered to have committed the offence of hijacking.
5. The **new law mandates the central government to confer powers of investigation, arrest and prosecution on any officer of the central government** or National Investigation Agency (NIA).
6. A bill to repeal 1982's Anti—Hijacking Act in this regard was introduced in Rajya Sabha by Civil Aviation Minister Ashok Gajapathi Raju on December 17, 2014.
7. After a few days, it was referred to a parliamentary panel which gave its report in March 2015.
8. **The bill was passed on May 4, 2016 in the Upper House, and on May 9, 2016 in the Lok Sabha**.

NSP for Malaria Elimination launched

Shri J P Nadda, Union Minister of Health and Family Welfare launched the **National Strategic Plan (NSP) for Malaria Elimination (2017-22)**. The Strategic Plan gives year wise elimination targets in various parts of the country depending upon the endemicity of malaria in the **next 5 years**. The government would like to eliminate malaria by 2027 and urged the states for active cooperation.

What

1. Recalling the launch of the **National Framework for Malaria Elimination (NFME) last year**, Shri Nadda stated that NFME outlined India's commitment for eliminating malaria by 2030.

2. The National Strategic Plan for Malaria Elimination (2017-22) gives strategies for working towards the ultimate goal of elimination of malaria by 2030.

3. The Health Minister further said that the National Strategic Plan is for five years and requested the Programme Officers to work with a strategy and follow the operational guidelines laid down in the National Strategic Plan.

Salient features of the NSP
1. Strengthening malaria surveillance
2. Establishing a mechanism for early detection and prevention of outbreaks of malaria
3. Promoting the prevention of malaria by the use of **Long Lasting Impregnated Nets (LLINs)**
4. Effective indoor residual spray and augmenting the manpower and capacities for effective implementation for the next five years

SC stays declaring Ganga, Yamuna as living

The Supreme Court on 7 July 2017 stayed the **Uttarakhand High Court verdict according the status of "living human entities" to Ganga and Yamuna**, two of India's major rivers. A bench of Chief Justice J S Khehar and Justice D Y Chandrachud passed the order on Uttarakhand government's plea against the high court's March 20 judgement, which said "**Holy rivers Ganga and Yamuna have been declared to be treated as a living human entities**."

What

1. The high court verdict had come on a **PIL of Haridwar resident Mohammad Salim over mining and stone crushing along the banks of the Ganga**.

2. The high court had also ordered the Dehradun District Magistrate (DM) to remove encroachments from the Shakti canal of the Ganga at Dhakrani within 72 hours, failing which the DM would be suspended.

3. Giving the "legal status" of living humans to the holy rivers, the court had ordered that the **Director, Namami Gange project for cleaning and rejuvenating the river, the Chief Secretary and the Advocate General of Uttarakhand will act as "legal parents" of the holy rivers** and work as a human face to protect, conserve and preserve them and their tributaries.

4. These officers will be bound to "uphold the status" of the two rivers and also promote their "health and well-being", the high court had said. It had also directed the government to form a Ganga Management Board in accordance with an earlier order of the court in December 2016.

India free from H5N1 and H5N8)

India had reported outbreaks of **Highly Pathogenic Avian influenza** at various epicenters in Delhi, Gwalior (MP), Rajpura (Punjab), Hissar (Haryana), Bellary (Karnataka), Allappuzha and Kottayam (Kerala), Ahmedabad (Gujarat), Daman (Daman) and Khordha and Angul (Odisha during October, 2016 to February, 2017.

What

1. All the **outbreaks of Avian Influenza (HPAI)** mentioned above were notified to World Organisation for Animal Health (OIE) and the control and containment operations were carried out as **per the Action Plan on Preparedness, Control and Containment of Avian Influenza**.

2. Surveillance was carried out throughout the country and around the areas of the outbreaks since completion of the operation (including culling, disinfection and clean-up) and surveillance in the states showed no evidence of presence of Avian Influenza Virus.

3. In view of the above, India has declared itself free from **Avian Influenza (H5N8 and H5N1)** from 6th June, 2017 and notified the same to OIE.

QRSAM test fired

The indigenously developed **Quick Reaction Surface-to-Air (QRSAM) short range missile**, which has a capability of engaging multiple targets, was successfully test-fired from a test range along the Odisha coast on 3 july 2017. **The missile has a strike range of 25 km to 30 km**. designed to be a quick reaction missile, it involves an all-weather weapon system capable of tracking and firing.

What

1. The missile was test-fired from a **truck-mounted canister launcher from launch complex-3 at the Integrated Test Range (ITR) at Chandipur near Balasore**.
2. All the technologies and sub-systems incorporated in the sophisticated missile have performed well, meeting all mission requirements.
3. **All radars, electro optical systems, telemetry systems** and other stations have tracked the missile and monitored all parameters and the test met all the objectives.
4. **This was the second developmental trial of the state-of-the-art missile with an aerial target**.
5. The missile has been developed by the DRDO and other establishments.
6. The first test launch of the missile was conducted on **June 4, 2017 from the same base**.

About H5N1?
1. **H5N1 is a type of influenza virus** that causes a highly infectious, severe respiratory disease in birds called **avian influenza (or "bird flu")**.
2. Human cases of H5N1 avian influenza occur occasionally, but it is difficult to transmit the infection from person to person.
3. When people do become infected, the mortality rate is about 60%.

About H5N8
1. **H5N8 is a subtype of the Influenza A virus** (sometimes called bird flu virus).
2. **H5N8 is considered one of the less pathogenic subtypes for humans**, it is beginning to become more pathogenic.
3. H5N8 has previously been used in place of the highly pathogenic H1N1 in studies.

Malabar 2017 begins

The US, Japanese and Indian navies on 10 July 2017 began the **Malabar Naval Exercise-2017** aimed at achieving **deeper military ties between the three nations**. Taking part in the trilateral naval exercise in the Bay of Bengal would be US Ship Nimitz (CVN68), guided missile cruise USS Princeton (CG59), guided missile destroyers USS Howard (DDG83), USS Shoup (DDG86) and USS Kidd (DDG100), a Poseidon P-8A aircraft as well as a Los Angeles fast-attack submarine. Besides, Japan Maritime Self Defence Force ships JS Izumo (DDH 183), JS Sazanami (DD1 13) along with Indian Naval Ship Jalashwa and INS Vikramaditya would participate in the joint Naval exercise.

When did the drills start?
1. The **Malabar exercise first took place 25 years ago in 1992**. Earlier **it was a bilateral drill between India and US**.
2. **Japan became a permanent member of the exercise in 2015**. It had, however, **participated in several drills since 2007 as a non-permanent member**.
3. The other non-permanent participants from the past are **Australia and Singapore**.

What

1. The **21st edition of the exercise**, conducted ashore and at-sea, would include professional exchanges on carrier strike group operations, maritime patrol and reconnaissance operations, surface and anti-submarine warfare.

2. Medical operations, damage control, explosive ordinance disposal, helicopter operations and anti-submarine warfare would also take place. The **at-sea exercise includes events such as submarine familiarisation, air defence exercises**, medical evacuation drills, surface ware fare exercises, communication exercise and search and rescue operations.

3. **Indian, Japanese and US maritime** forces have an understanding and knowledge of shared working environment at sea. As members of Indo-Asia Pacific operations, the three maritime forces would look forward to continuing to strengthen the bonds and personal relationships.

4. The Malabar exercise is taking place amid the military standoff between armies of the India and **China in the Sikkim section and Beijing ramping up its Baval presence in South China sea**.

SBT antenna terminal developed

Space agency **ISRO's Telemetry, Tracking and Command Network 'ISTRAC'** has designed and developed a **Ship Borne Transportable (SBT) Antenna Terminal** to meet the launch vehicle telemetry tracking and command requirements. The 4.6 meter **Ship Borne Antenna System has been built indigenously**, fulfilling all specifications and has established in-house capability for meeting future requirements. It has also improved the operational reliability due to in-house know-how of the system engineering, besides reducing the cost considerably.

What

1. The city-based ISTRAC provides tracking **support for all satellite and launch vehicle missions of ISRO** and also provides space operations support for **Deep Space Missions**.

2. According to ISRO, for supporting Deep Space Missions, a large number of ground stations are required to provide TTC support during the launch and initial phase, and based on the launch vehicle trajectory and visibility requirement, many a time, the TTC stations are to be located in mid sea wherein conventional Ground Station Antenna will not be suitable.

3. In order to cater to these specific requirements, **ISTRAC designed and developed the 4.6 meter SBT Antenna Terminal** that meets the launch vehicle TTC requirements, it said.

4. Noting that **Mechanical Systems Area (MSA) of ISTRAC made a detailed study of technical requirements**, availability of similar systems internationally and derived state-of-the-art specifications, ISRO said the SBT Antenna system consists of 3-axis Antenna Mount, a Motion Simulator, Reflector and Feed, Servo Control Systems and RF Electronics.

5. The Antenna system was realised with the **participation of Indian Industries** and has been tested and validated on a motion simulator.

6. The final system performance and validation was carried out by a sea trial, wherein the antenna system was integrated on **Sagar Manjusha ship hired from the National Institute of Ocean Technology (NIOT)**.

7. ISRO said the ship was stationed at a specified observation point in the **Bay of Bengal and has successfully tracked PSLV-C38**.

8. PSLV-38 was launched on June 23 from the spaceport in Sriharikota in Andhra Pradesh, carrying the Cartosat-2 series satellite – a dedicated satellite for the defence forces -along with 30 nano satellites as co-passengers.

Indian scientists discover Saraswati

A team of Indian scientists has reported the **discovery of a previously unknown 'supercluster' of galaxies**, some four billion light years away from Earth, and **named it Saraswati**. **Superclusters, a group of clusters of galaxies**, are the largest structures of stars, planets and other heavenly bodies in the universe, and very few of them are known.

What

1. **There are basically only four or five known superclusters of this size in the entire universe**. So, our discovery is a rare find," Shishir Sankhyayan, a PhD

student at the **Indian Institute of Science Education and Research (IISER), Pune**, who was part of the team of scientists that discovered the supercluster.

2. Besides Sankhyayan, the team had scientists from **Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune**, Newman College in Thodupuzha in Kerala, and National Institute of Technology, Jamshedpur, and was led by Joydeep Bagchi.

3. **Galaxies are themselves made of billions of stars and planets**, and a cluster typically contains several hundreds of these galaxies. Superclusters are relatively recent finds, having been identified for the **first time only in the 1980s**.

4. In fact, Somak Raychaudhury, director of IUCAA and a member of this team, is credited with finding one supercluster in 1989 when he was a PhD student in the UK.

5. **The Milky Way galaxy, of which Earth is a very small member, is part of the Laniakea supercluster**, that was identified only in 2014, a statement from IUCAA said.

6. **The Saraswati supercluster** was estimated to have a mass of 2 x 1016 (twenty thousand trillion) suns, and could contain thousands of suns, besides having billions of stars, planets, other bodies, gases and dark matter. Saraswati is estimated to be stretched over 650 million light years in distance.

7. It is around this time, scientists believe, that dark energy, about which we know little, had begun to dominate the space in the universe. The study of Saraswati therefore is likely to offer more insight into our understanding of dark energy.

Google acquires India's AI startup

Global internet giant **Google has made its first acquisition in India by taking over Halli Labs**, a four-month-old **artificial intelligence (AI) and machine learning (ML) startup**, that was looking to build solutions for the Indian masses.

What

1. **Halli (village in Kannada) Labs has been in stealth mode** ever since it made its first announcement on Medium on May 22 this year.

2. Founder Pankaj Gupta's LinkedIn account suggests that the firm was started in April this year, the very next month after he left the now-defunct local Airbnb rival Stayzilla. Gupta has a PhD in Computer Science from Stanford University.

3. Halli Labs in its post says it was born with the vision of "**applying modern ML techniques to old problems and domains**", an indication that it wanted to help rural India get access to information on the patchy internet.

4. India has emerged as among the biggest markets for internet companies such as Google, Facebook and Apple for talent as well as business.

5. The increasing number of startups, built by former employees of these and other multinational firms, has helped focus on companies that build products to solve problems of consumers, both in India and the world.

6. In January 2014, **Facebook acquired Bengaluru-based Little Eye Labs, a startup that tracks and optimises the performance of Android-based mobile apps**.

7. The next year **Twitter acquired another Bengaluru-based startup Zipdial**, which built a business through India's habit of giving missed calls to connect with other users.

8. **In 2016, Apple acquired Hyderabad-based AI startup Tuplejump**.

First solar-powered DEMU train

Indian Railways today launched first solar-powered DEMU (diesel electrical multiple unit) train from the **Safdarjung railway station in Delhi**. The train will run from Sarai Rohilla in Delhi to Farukh Nagar in Haryana. A total of 16 solar panels, each

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producing 300 Wp, are fitted in six coaches. The cost of these solar panels, manufactured under '**Make in India' initiative**, is Rs 54 lakh.

What

1. **This is the first time in the world** that solar panels are being used as grid in railways.
2. This train has been manufactured by the Coach Factory of Indian Railways namely **Integral Coach Factory (ICF), Chennai**, its Solar panels and Solar systems have been developed and fitted by **Indian Railways Organisation of Alternative Fuel (IROAF) Delhi**.
3. This first rake has been commissioned and based at Shakurbasti DEMU shed in Delhi of Northern Railway. Twenty-four more coaches will be fitted with this system within the next 6 months. The first rake will be put in the commercial service over the suburban railway system of Delhi division of Northern Railway.
4. Indian Railways is also taking several others environment friendly measures like **Tea Plantation, Bio-toilet, Water-Recycling, Waste Disposal, using Bio-fuel CNG and LNG, Wind Energy** etc.
5. Normally, DEMU trains provide power for its passenger comfort systems – **lights and fans** - from a diesel driven generator fitted on its Driving Power Car (DPC).
6. IROAF has developed this system with a smart MPPT inverter which optimises power generation on a moving train to cater to full load even during the night. The unique feature of Battery Bank through storage battery ensures sufficient electricity when the sunlight is not available. The system helps in reducing Diesel consumption of the DPC and hence reduces carbon signature of these commuter trains by **reducing CO2 generation by 9 Tonnes per coach per year**.
7. Today, NR has 3 DEMU sheds having highest DEMU holding on Indian Railways.
8. Shakurbasti DEMU shed of Northern Railway has been a pioneer in the field of green powered DEMUs - CNG & Solar powered.
9. The very first CNG fitted DEMUs were run by Shakurbasti. Now the first Solar panel powered DEMU train will also be maintained and operated by DEMU shed, Shakurbasti of Northern Railway. This pioneering effort makes a transition towards clean energy and reduction in the carbon emission.
10. **Noida-based firm Jakson Engineers Limited (JEL) had been given the task of providing solar panels for DEMU coaches** set to be used by the Railways for its pilot projects in Chennai and Amritsar.
11. **Indian Railways' first DEMU service was between Jalandhar and Hoshiarpur on October 23, 1994**. The 1400 HP DEMU train services were introduced in 2002, while the 1600 HP DEMU services were introduced this year.

India's anti-hijacking law comes into force

The **country's new anti-hijacking law**, which **prescribes capital punishment in the event of death of "any person"**, has come into force following a government notification. **The 2016 Anti-Hijacking Act replaces a 1982-vintage law**, according to which hijackers could be tried only in the event of death of hostages, such as flight crew, passengers and security personnel.

What

1. In the new law, **the definition has been expanded to include death of "security personnel on board" or "ground support staff" as well**.
2. In other cases of hijacking, guilty will be punished with imprisonment for life and fine, besides confiscation of movable and immovable property held by him or her.
3. The new law, which has come into effect after its notification on July 5, includes several acts within the definition of hijacking including making a threat, attempts or abatement to commit the offence.
4. Those who organise or direct others to commit such offence will also be considered to have committed the offence of hijacking.

5. The **new law mandates the central government to confer powers of investigation, arrest and prosecution on any officer of the central government** or National Investigation Agency (NIA).

6. A bill to repeal 1982's Anti—Hijacking Act in this regard was introduced in Rajya Sabha by Civil Aviation Minister Ashok Gajapathi Raju on December 17, 2014.

7. After a few days, it was referred to a parliamentary panel which gave its report in March 2015.

8. **The bill was passed on May 4, 2016 in the Upper House, and on May 9, 2016 in the Lok Sabha**.

India's first TISC

The **Department of Industrial Policy and Promotion (DIPP)**, Ministry of Commerce & Industry, Government of India, **signed an Institutional agreement with the Punjab State Council of Science and Technology in New Delhi** to establish **India's first Technology and Innovation Support Center (TISC)** at Patent Information Centre, Punjab, under the **World Intellectual Property Organization's (WIPO) TISC program**.

What

1. **The objective of the TISC is to stimulate a dynamic, vibrant and balanced Intellectual Property Rights (IPRs) system in India** to foster creativity and innovation, thereby promoting entrepreneurship and enhancing social, economic and cultural development by establishing a network of TISCs in India.

2. **WIPO's Technology and Innovation Support Center (TISC) program** provides innovators in developing countries with access to locally based, high quality technology information and related services, helping them to exploit their innovative potential and to create, protect, and manage their **Intellectual Property Rights (IPRs)**.

3. The **Cell for IPR Promotion and Management (CIPAM) is designated as the National Focal Point for the TISC national network**.

4. As the national focal point, CIPAM shall identify potential host institutions, assess their capacities and support them in joining the TISC program.

5. **CIPAM will also act as the main intermediary between WIPO and TISC host institutions** and coordinate all the activities of the national TISC network.

6. Over 500 TISCs operate worldwide and establishing TISC in India will give the host institutions an access to the global network.

Services offered by TISCs:
1. Access to **online patent and non-patent (scientific and technical) resources** and IP-related publications;
2. Assistance in searching and retrieving technology information;
3. Training in database search;
4. On-demand searches (novelty, state-of-the-art and infringement);
5. Monitoring technology and competitors;
6. Basic information on industrial property laws, management and strategy, and technology commercialization and marketing.

7. In upcoming years, CIPAM is planning to establish TISCs in Universities, State Science Councils, R&D institutions etc.

8. TISC will give an impetus to knowledge sharing, sharing of best practices among the TISCs, capacity building, generation and commercialization of IPs.

India-UN Development Partnership Fund

India has contributed an additional million dollars to a **UN partnership fund** launched **to support sustainable development projects across the developing world**. The **India-UN Development Partnership Fund** was set up last month as a partnership between **India and the United Nations Office for South-South Cooperation (UNOSSC)**. India had made an initial contribution of a million dollars when the fund was

created and the amount was allocated for the implementation of a project **benefiting seven Small Island Developing States in the South Pacific**.

What

1. India enlarged its **support to sustainable development through the multilateral system** by making a supplemental contribution of one million dollars to the fund.

2. India-UN Development Partnership Fund plays an **important role in funding South-South cooperation for effective development**, and "thereby contributes to meeting both national development goals and the commitments of **Agenda 2030**."

3. **Managed by UNOSSC**, the fund will support Southern-owned and led, demand-driven, and transformational sustainable development projects across the developing world. Focusing on **Least Developed Countries (LDCs)** and **Small Island Developing States**, United Nations agencies will implement the Fund's projects in close collaboration with partnering governments.

4. **The fund, launched by Minister of State for External Affairs M J Akbar** during **the Oceans Conference at the world body's headquarters**, prioritises reducing poverty and hunger, improving health, education and equality, and expanding access to clean water and energy.

5. **The first project under the fund** was formulated by India and UNDP in consultation with the Governments of the **Cook Islands, Kiribati, Marshall Islands, Micronesia, Nauru, the Solomon Islands and the Kingdom of Tonga**.

6. It will increase resilience to natural disasters in these seven Pacific island countries and contribute toward a Sustainable Development Goal of climate action.

INTERNATIONAL

Hamburg Action Plan

The **12th G-20 summit** concluded in **Germany's Hamburg city** with adaptation of Hamburg Action Plan. It sets out the group's strategy for achieving strong, sustainable, balanced and inclusive growth. The action plan aims to address major global challenges, including climate change, harnessing digitalisation, and to contribute to prosperity and well-being.

What

1. **Tackle common challenges:** G20 members resolved to tackle common challenges to the global community, including terrorism, displacement, hunger, poverty and health threats, job creation, climate change, energy security and inequality including gender inequality, as a basis for sustainable development and stability.

2. **Trade and globalisation:** They stressed on the importance of harnessing the benefits of globalisation, reaffirm the importance of transparency for

About Group of Twenty (G20)

1. **The G20 is the premier forum** for its members' international economic cooperation and decision-making.

2. It is deliberating on global economic issues and other important development challenges.

3. **It was started in 1999** as a meeting of Finance Ministers and Central Bank Governors in the aftermath of the Southeast Asian (Tiger economies) financial crisis.

4. **In 2008, the first G20 Leaders' Summit was held in Washington DC**, US.

5. Its members include 19 countries India, Australia, Argentina, Brazil, Canada, China, France, Germany, Indonesia, Italy, Japan, South Korea, Mexico, Saudi Arabia, Russia, Turkey, South Africa, UK, US and European Union (EU).

6. They collectively represent 85% of global GDP, 80% of international trade, 65% of world's population

predictable and mutually beneficial trade relations. They also underlined importance to boost employment by improving sustainable global supply chains, as an important source of job creation and balanced economic growth.

3. **Continue to use all policy tools:** G20 members will use all policy tools such as monetary, fiscal and structural- individually and collectively to achieve the goal of strong, sustainable, balanced and inclusive growth, while enhancing economic and financial resilience.

4. **Paris Agreement:** They agreed that the 2015 Paris Agreement is irreversible and reiterated the importance of fulfilment of the UNFCCC commitments by developed countries in providing means of implementation including financial resources to assist developing countries with respect to both mitigation and adaptation actions.

5. **Sustainable livelihoods:** G-20 members are committed to increase innovation on sustainable and clean energies and energy efficiency, work towards low greenhouse-gas emission energy systems and harness digitalisation to achieve the goals of the 2030 Agenda for Sustainable Development.

6. **Global Health systems:** G-20 members called for strengthening health systems and safeguarding against health crises. The leaders called on the UN to keep global health high on the political agenda and strive for cooperative action to strengthen health systems worldwide, including through developing the health workforce. The leaders also stressed on combatting Anti-Microbial Resistance (AMR), which is a growing threat to public health and economic growth.

India attends SCO

Amid a **stand-off in the Sikkim sector** with Chinese troops, **India has attended an SCO meeting in China** to enhance anti-terrorism and border control mechanisms among member nations, the first plenary meeting after India and Pakistan became full members of the China-dominated security grouping. **Seven Shanghai Cooperation Organisation (SCO) member states** including China, India and Russia participated in the organisation's meeting of heads of border control departments on 29 June 2017 in Dalian, Northeast China's Liaoning Province.

What

1. **This is the first plenary meeting** since India and Pakistan joined the grouping in June. The other members are **China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan**.

2. India and Pakistan last month became full members of the SCO that is increasingly seen as a counterweight to NATO.

3. **India's membership was strongly pushed by Russia** while **Pakistan's entry into the grouping was backed by China**.

4. Member states discussed how to cooperate on combating terrorism, separatism and extremism.

5. The members also talked about a joint operation along the border to prevent trans-border crimes and to improve the organisation's cooperation on safeguarding border security at the SCO meeting.

6. Indian delegation attended the meeting **"despite border rift with China in the Sikkim sector"**.

7. There is an ongoing stand-off between Indian and Chinese troops in the Sikkim sector after the Indian Army blocked construction of a road by China in **Doklam**, a disputed territory between China and Bhutan.

Cyprus reunification talks collapse

Talks to reunify the divided island of Cyprus collapsed in the early hours of 7 July 2017, UN Secretary General Antonio Guterres said after a stormy final session.

What

1. **The collapse marked a dramatic culmination of more than two years of a process** thought to be the most promising since the **island was split more than 40 years ago**.

2. Guterres had flown in on 6 July 2017 to press Greek Cypriot President Nicos Anastasiades and Turkish Cypriot leader Mustafa Akinci to seal a deal reuniting

3. Diplomatic efforts to **reunite Cyprus have failed since the island was riven in a 1974 Turkish army invasion** triggered by a coup by Greek Cypriots seeking union with Greece.

4. The week of talks in **the Swiss Alps, hailed by the United Nations as "the best chance" for a deal**, ground to a halt as the two sides failed to overcome final obstacles.

5. Diplomats said Turkey had appeared to be offering little to Greek Cypriots wanting a full withdrawal of Turkish troops from the island, although the Greek Cypriots had indicated readiness to make concessions on Turkish Cypriot demands for a rotating presidency, the other key issue.

6. Greek Cypriots, who are due to launch a gas drill off the island in coming weeks that Turkey opposes, pointed the finger of blame at the Turkish Cypriot side.

India, Israel ink 7 pacts

India and Israel on 5 July 2017 elevated their ties to the "**strategic partnership**" level with a vow to do "**much more together**" to combat growing radicalisation and terrorism and pitched for "strong measures" against those financing and providing sanctuaries to terror groups. The issue of terror and "strategic threats" along with various other topics like **cooperation in defence and security**, **water**, **agriculture**, **space** and West Asia figured prominently in the talks between Prime Minister Narendra Modi and his Israeli counterpart Benjamin Netanyahu in Jerusalem.

What

1. India and Israel signed 7 agreements to step-up cooperation in key sectors like **space, agriculture and water conservation**.

2. MoU signed between **Department of Science & Technology and Israel's National Technological Innovation Authority** for setting up of $40 million worth India-Israel Industrial R&D & Technical Innovation Fund.

3. Ministry of Drinking Water & Sanitation, and Israel's Ministry of National Infrastructure, Energy & Water Resources signed a pact on **National Campaign for Water Conservation in India.**

4. The second one was signed between **Uttar Pradesh Jal Nigam and the Ministry of National Infrastructure, Energy & Water Resources on state water utility reform in India.**

5. In the farm sector, the two countries have agreed upon **India-Israel development cooperation - a three-year work programme in agriculture from 2018 to 2020.** They also agreed for cooperation between the Isro and the Israel Space Agency (ISA) regarding cooperation in atomic clocks

6. India and Israel also **agreed to set up a $40 million fund for industrial Research and Development, and innovation fund**, with both countries contributing $20 million each.

7. The two leaders recognised that terrorism poses a grave threat to global peace and stability and reiterated their strong commitment to combat it in all its forms and manifestations.

EU & India establish an IFM

European Union (EU) and India announced the **establishment of an Investment Facilitation Mechanism (IFM) for EU Investments in India**. The mechanism will allow for a **close coordination between the European Union and the Government of India** with an aim to promote and facilitate EU investment in India. This agreement builds on the Joint Statement of the **13th EU-India Summit held in Brussels in March 2016**, where the EU

had welcomed India's readiness to establish such a mechanism and leaders from both sides had reaffirmed their shared commitment to oppose protectionism and to work in favour of a fair, transparent and rule-based trade and investment environment.

What

1. As part of the IFM, the EU Delegation to India and the **Department of Industrial Policy & Promotion (DIPP)**, Ministry of Commerce & Industry, agreed to hold regular high level meetings to assess and facilitate "**ease of doing business**" for EU investors in India. This will include identifying and putting in place solutions to procedural impediments faced by EU companies and investors in establishing or running their operations in India.

2. **The EU is the largest foreign investor in India** and this initiative helps ensuring a more robust, effective and predictable business environment for the EU investors.

3. The IFM has been established with the key objectives of **paving the way for identifying and solving problems faced by EU companies** and investors with regard to their operations in India.

4. The IFM will cover new investors as well as those already established in India. The IFM is also going to serve as a platform for discussing general suggestions from the point of view of EU companies and investors with regard to ease of doing business in India.

5. **Invest India, the official Investment Promotion and Facilitation Agency of the Government of India, will also be part of the Mechanism**. It will create a single-window entry point for EU companies that need assistance for their investments at the central or state level. The DIPP will also facilitate participation of other relevant ministries and authorities on a case-to-case basis.

6. Trade and Investment are key elements of the **EU-India Strategic Partnership launched in 2004**. Along with being the first trade partner in goods and services, EU is one of the biggest provider of foreign investment in India, with a stock exceeding US$ 81.52 billion (more than 4.4 lakh crores INR) as of March 2017.

7. There are currently more than 6,000 EU companies present in India, providing direct and indirect employment to over 6 million people.

ECONOMY

First to apply for a universal banking licence

UAE **Exchange and Financial Services Ltd**, the B R Shetty-promoted money changing company, has applied for a **universal bank licence**. It is the **first company to apply for a universal banking licence** under the "**on tap**" licensing of universal banks in the private sector. **The Reserve Bank of India (RBI)** announced UAE Exchange had made a bid. **UAE Exchange is registered as an AD II category** non-banking financial company in the country and has been operating from 1999 with its registered office in Bengaluru. **Shetty, a Gulf-based non-resident Indian**, is the founder of UAE Exchange India and also the founding partner and CEO of NMC Healthcare, Abu Dhabi.

What is 'Universal Banking'?

1. Universal banking is a banking system in which **banks provide a wide variety of financial services**, including commercial and investment services.

2. Universal banking is common in some European countries, including Switzerland. In the United States, however, banks are required to separate their commercial and investment banking services.

3. Proponents of universal banking argue that it helps banks better diversify risk. Detractors think dividing up banks' operations is a less risky strategy.

What

1. Reserve Bank of India released guidelines for **'on tap' licensing of Universal Banks in the Private Sector**.
2. On tap licensing literally means the **RBI window for granting banking licences will be open throughout the year**.
3. RBI stated that the licensing window will be open on-tap, and the applications in the prescribed form along with requisite information could be submitted to the Reserve Bank at any point of time.

First company to face bankruptcy proceedings

     The National Company Law Tribunal (NCLT) on 4 July 2017 allowed the initiation of bankruptcy proceedings against the **Mumbai-based Jyoti Structures** under **the Insolvency and Bankruptcy Code** after the company failed to repay its Rs 7,000 crore worth of debt to lenders. With this, the company became the **first entity against** which NCLT cleared action after the Reserve Bank of India (RBI) identified 12 firms struggling in the respect.

What

1. RBI had even nudged banks to take action against the identified firms under the **Insolvency and Bankruptcy Code**.
2. As per the NCLT order issued on 4 July 2017, the board of directors of the company will be suspended and consultancy firm, BDO would manage the company. The company has not opposed the action by the banks so far and has informed the court about a potential buyer interested in taking over the firm.
3. In the financial year 2017, the company made a massive loss of Rs 1482 crore on revenues of Rs 852 crore.
4. On an earlier occasion, the company had said that despite its best efforts, the restructuring package, as envisaged by the JLF (Joint Lenders Forum), could not be successfully implemented and the banks did not release the enhanced working capital facilities.
5. With this, the company was unable to adhere to the milestones stipulated in restructuring package and the lenders had to invoke the **Strategic Debt Restructuring Scheme (SDR)** in terms of the extant RBI guidelines.
6. Since then, the lenders decided to restructure the debt and evaluate investment proposal submitted by a strategic investor, outside SDR, the company has informed its shareholders last year.
7. JSL supplies equipment and undertakes turnkey solutions of **Power Grid Corporation of India Limited (PGCIL)** and **National Thermal Power Corporation (NTPC)**.

J&K passed GST

     The Jammu and Kashmir Assembly on 5 July 2017 **passed a resolution to pave the way for the implementation of GST**, with Finance Minister Haseeb Drabu saying that there would be enough constitutional safeguards for the state in the new tax regime.

How

1. **Section 5 of the J&K constitution**, which grants the state exclusive powers of taxation, would be protected in the presidential order on GST.
2. **Article 370, which accords a special position to the state**, will not be compromised in the presidential order.
3. There will be enough safeguards to empower J&K in the GST Council.
4. **The GST Council would come under the ambit of Article 370**.
5. Exclusive powers of taxation by the state government would not be endangered.

'Aaykar Setu' launched

     A **new tax payer service module 'Aaykar Setu', was launched** by the Union Finance Minister, Shri Arun Jaitley. **To enhance mobile access experience, a mobile responsive android version was also released** along with the desktop version. Shri Jaitley stressed on the Government's commitment towards continuously **upgrading tax payer**

services. He said that this e-initiative would help in reducing physical interface between assesses and tax assessing authorities and thereby minimizing the chances of any tax harassment.

What

1. **The new step is an effort by the Income Tax Department (ITD)** to directly communicate with the taxpayers, on a range of multiple informative and useful tax services aimed at providing tax information at their fingertips.

2. The module compiles various tax tools, live chat facility, dynamic updates, and important links to various processes within the **Income Tax Department in a single module**.

3. The tax payers will also be able to receive regular updates regarding important tax dates, forms and notifications on mobile numbers registered with the ITD.

4. All taxpayers who wish to receive such SMS alerts are advised to register their mobile numbers in the **Aaykar Setu module**.

5. The Central Board of Direct Taxes (CBDT) constantly endeavours to provide better taxpayer services and reduce taxpayer grievances. New schemes and e-initiatives to educate the taxpayers and deliver tax payer services in an effective manner are key to this effort.

E-way bill system in GST

The GST provision, **requiring any good more than Rs. 50,000 in value to be pre-registered online before it can be moved**, is likely to kick in from October after a **centralised software platform is ready**. The provision, called the **e-way bill**, would be implemented after infrastructure for smooth generation of registration and its verification through hand-held devices with tax officials is ready.

What

1. **The information technology platform for the e-way bill system** is being developed by the **National Informatics Centre (NIC) along with GST-Network** — the company which has developed the **IT backbone for the new indirect tax regime**.

As per GST Law:
1. Under the GST regime, **an Integrated GST (IGST) would be levied and collected by the Centre on inter-State supply of goods and services**.
2. Under **Article 269A of the Constitution**, the GST on supplies in the course of inter State trade or commerce shall be levied and collected by the Government of India and such tax shall be apportioned between the Union and the States in the manner as may be provided by Parliament by law on the recommendations of the Goods and Services Tax Council.

2. The Centre has also decided to relax the timeline provision under which the e-way bill generated by GSTN for 20 days for goods travelling more than 1,000 km. Earlier, this was 15 days.

3. As per the provision, **GSTN would generate e-way bills that will be valid for 1-20 days**, depending on distance to be travelled — one day for 100 km, 3 days (100 to less than 300 km), 5 days (300-less than 500 km) and 10 days (500-less than 1,000 km).

4. The GST Commissioner may extend the validity period of e-way bill for certain categories of goods.

5. Although **the Goods and Services Tax (GST) has been rolled out from July 1**, a centralised e-way bill could not be implemented as the rules and forms were not ready.

6. **Originally, GSTN was to develop the e-way bill platform**, but last month only the GST Council decided to rope in NIC to develop it since it was felt that in the

initial days of GST roll out, GSTN would be busy with other works like solving issues like registration and invoice generation.

First bill of entry in IGST filed

The first ever GST-enabled Bill of Entry in Integrated GST in India was filed, assessed and duty paid at **Chennai Customs House**. The bill of entry was filed by **International Clearing and Shipping Agency**, a Custom House Agency, at Chennai Custom House. Chennai Customs was entrusted with updating the CBEC/ICEGATE directories with the latest notifications.

What

1. **IGST is a part of Goods and Service Tax (GST)**.
2. **IGST means Integrated Goods and Service Tax**, one of the three categories under Goods and Service Tax (**CGST, IGST and SGST**) with a concept of one tax one nation.
3. **IGST falls under Integrated Goods and Service Tax Act 2016**.
4. IGST is charged when movement of goods and services from one state to another. For example, if goods are moved from Tamil Nadu to Kerala, IGST is levied on such goods. The revenue out of IGST is shared by state government and central government as per the rates fixed by the authorities.

Banks guide under IndAS

The **Reserve Bank of India (RBI) plans to guide banks in their transition to Indian Accounting Standards (IndAS)** from 1 April next year—**particularly on bad-loan provisioning**, which will be based on expected future losses. The transition will be challenging for banks in terms of the **skills required to adapt to the new standards**, as well as the higher amount of provisioning that will be needed, RBI said in its **Financial Stability Report (FSR)**.

What

1. Under current rules, **banks set aside money to cover losses incurred**. Under IndAS, they must **make provisions after assessing expected losses**, in line with international norms.
2. Migrating to IndAS may increase banks' provisioning requirements by 30%.
3. In the FSR, the central bank said while it is finalising **regulatory guidance related to expected credit loss (ECL)**—the centrepiece of IndAS for banks— lenders should simultaneously design their own accounting frameworks.
4. Determining ECL based on the probability of default is quite subjective, and different banks may assess the same asset differently.
5. A guiding norm **would ensure that there is not too much deviation and the balance sheet reflects the true picture of the bank**as well (as that) of the economy.
6. RBI had asked banks last year to submit pro-forma Ind AS financial statements based on the financial results for the six months ended 30 September 2016. In the FSR, the central bank said that while banks had initiated the process, more efforts are required for the switch-over.
7. The analysis of **pro forma financial statements submitted by the banks** revealed wide variations in underlying assumptions leading to divergence in provisioning requirements.

Banks tap hackathons in digital world

Banks are opening up their platforms and data to people with ideas to improve their business in a **digitally disruptive environment**. Unlike in the past, banks such as **State Bank of India**, **RBL** and **Axis Bank** are organising hackathons to welcome youngsters to innovate digital solutions. Axis Bank held a similar event last year for technical and business roles across their offices. **Hackathons help banks attract talent instead of recruiting people first** and then putting them through extensive digital transformation.

SBI's Code For Banks which concluded last week was a month long event with over 1,000 participating teams. Based on this success, the bank is working towards conducting quarterly hackathons in the future with **specific themes to increase speed of innovation**.

What

1. **HackerEarth, a start-up in Bengaluru** that helps **tech firms and banks to conduct hackathons** and discover ideas and talent, says the exercise is a low cost and high impact programme for organisations to achieve their objectives.

2. Typically, **an organisation would spend millions to drive innovation internally** and might even end up acquiring a few companies in the process.

3. **Hackathons provide a bottoms up approach** where developers compete to come up with such ideas.

4. Basically, banks have figured out that they need to be part of the entire user experience rather than just providing banking facilities if they want to remain relevant.

5. **Big Data**, **Artificial Intelligence**, **Machine learning** and **robotics** are **the hottest trends at hackathons** although the events themselves are technology agnostic. The focus is always on finding the best solutions.

6. French multinational finance institution Societe Generale recently hired a number of candidates through a Hackathon. The ICICI bank Hackathon earlier this year generated over 600 innovative ideas in one event.

7. **Hackathons are useful not only in finding talent** that may have great ideas but not the financial strength to achieve it.

8. It also helps to increase the **visibility of the bank itself**.

Financial sector's cyber warrior

An expert group has proposed the setting up of an independent **Computer Emergency Response Team for Finance (CERT-Fin)** to be the **cyber warrior of the financial sector**. CERT-Fin will be the key to ensuring a **comprehensive cybersecurity framework for the financial sector**, especially at a time when there has been a burst of activity in the fintech space as India makes efforts to embrace a less-cash economy.

What

1. Till this body—to be set up as a **not-for-profit company with a governing board**—is functional, the panel has recommended that **Reserve Bank of India (RBI) act** as the lead regulator.

2. **CERT-Fin will report to the Indian Computer Emergency Response Team (CERT-In)**, the agency tasked with coordinating efforts on cyber security issues, to ensure complementary.

3. The report of the working group, headed by CERT-In director general Sanjay Bahl, has been put in the public domain for discussions by the department of economic affairs. The deadline for submitting responses is 31 July.

4. In the Union budget for 2017-18, finance minister Arun Jaitley had announced the **setting up of CERT-Fin**. Subsequently, the government set up the expert group to give shape to this entity.

5. The vulnerability of the financial sector has increased as **India pushes towards a less-cash economy**. Last year, after a malware injection in the systems of Hitachi Payment Services Pvt. Ltd, about 3.2 million debit cards were compromised; similarly, hackers had infected the servers of the Union Bank of India with malware.

6. **India is one of the largest targets of cyber attacks not only on businesses but also on individuals**. The threat of cyber attack is real. Most of the times, companies are either not aware that an attack has taken place, or are hesitant to report it.

7. Further, the panel observed that the dispersal of technical resources is skewed towards cities even as online financial transactions continue to spread across the country. "The preparedness of the financial sector to meet the cyber challenges from different threat vectors cannot be considered robust.

8. The group has recommended that CERT-Fin include representatives from regulators as well as experts with sophisticated IT skills hired at market-linked rates.

9. **The panel was instituted by the Financial Stability and Development Council**, an apex body chaired by the finance minister.

India slips in Swiss money

India has slipped to 88th place in terms of money parked by its citizens with Swiss banks, while **the UK remains on the top**. Also, the money officially held by Indians with banks in Switzerland **now accounts for a meagre 0.04%** of the total funds kept by all foreign clients in the Swiss banking system, as per an analysis of the latest figures compiled by the **SNB (Swiss National Bank) as on 2016-end**.

What

1. India was placed at **75th position in 2015** and at **61st in the year before** that, though it used to be among top-50 countries in terms of holdings in Swiss banks till 2007. The country was ranked **highest at 37th place in the year 2004**.

2. The latest data from Zurich-based SNB comes ahead of a **new framework for automatic exchange of information between Switzerland and India** to help check the black money menace.

3. The funds, described by SNB as '**liabilities**' of Swiss banks or '**amounts due to**' their clients, are the official figures disclosed by the Swiss authorities and do not indicate to the quantum of the much-debated alleged black money held by Indians in the safe havens of Switzerland.

4. SNB's official figures also do not include the money that **Indians, NRIs or others might have in Swiss banks in the names of entities from different countries**.

5. The total money held in Swiss banks by foreign clients from across the world, incidentally **rose by a small margin from 1.41 trillion Swiss francs (CHF) to CHF 1.42 trillion** during 2016.

6. In terms of individual countries, the **UK accounted for the largest chunk at about CHF 359 (over 25%)** of the total foreign money with Swiss banks.

7. **Indians' share not even one-hundredth of the total money**. **India is now ranked 88th with 676 million Swiss francs (about Rs4,500 crore)**—a record low after falling for three consecutive years amid a continuing clampdown on the suspected black money stashed behind their famed secrecy walls.

8. The share of Indians' money in the total foreign funds of Swiss banks also **fell to 0.04% (from 0.08% in 2015)**. Pakistan continued to remain placed higher than India at 71st place (although down from 69th in 2015) with about CHF 1.4 billion—though down to below 0.1% of total foreign money parked with Swiss banks.

9. **India was also the lowest ranked among the BRICS nations**—Russia was ranked 19th (CHF 15.6 billion), China 25th (CHF 9.6 billion), Brazil 52nd (CHF 2.7 billion) and South Africa 61st (CHF 2.2 billion). Among these five, **only China has moved up**. Others ranked higher than India included Mauritius, Iran, Morocco, Kenya, Nigeria, Kazakhstan, Ukraine, Angola, the Philippines, Malaysia, Indonesia, Canada and Mexico.

SCIENCE AND TECHNOLOGY

First asteroid deflection mission

NASA is developing the first-ever mission that will **deflect a near-Earth asteroid**, and help test the systems that will allow mankind to protect the planet from potential cosmic body impacts in the future. The **Double Asteroid Redirection Test (DART)** – which is being designed and would be built and managed by the **John Hopkins**

Applied Physics Laboratory – is moving from concept development to preliminary design phase.

What

1. **DART would be NASA's first mission to demonstrate what's known as the kinetic impactor technique** – striking the asteroid to shift its orbit – to defend against a potential future asteroid impact.

2. This approval step advances the project towards a historic test with a **nonthreatening small asteroid**. "DART is a critical step in demonstrating we can protect our planet from a future asteroid impact"..

3. **The target for DART is an asteroid that will have a distant approach to Earth in October 2022**, and then again in 2024. The asteroid is called **Didymos – Greek for "twin"** -because it is an asteroid binary system that consists of two bodies: Didymos A, about 780 metres in size, and a smaller asteroid orbiting it called Didymos B, about 160 metres in size.

4. DART would impact only the smaller of the two bodies, **Didymos B**. The Didymos system has been closely studied since 2003. The primary body is a rocky S-type object, with composition similar to that of many asteroids.

5. The composition of its small companion, **Didymos B, is unknown**, but the size is typical of asteroids that could potentially create regional effects should they impact Earth. After launch, DART would fly to Didymos and use an APL-developed onboard autonomous targeting system to aim itself at Didymos B.

6. Then the refrigerator-sized spacecraft would strike the smaller body at a speed about nine times faster than a bullet, about six kilometres per second.

7. **Earth-based observatories would be able to see the impact and the resulting change in the orbit of Didymos B around Didymos A**, allowing scientists to better determine the capabilities of kinetic impact as an asteroid mitigation strategy.

8. The kinetic impact technique works by changing the speed of a threatening asteroid by a small fraction of its total velocity, but by doing it well before the predicted impact so that this small nudge will add up over time to a big shift of the asteroid's path away from Earth.

Supernova explosions inside labs

In a first, **scientists have recreated the effects of supernovae** – **violent star deaths** – within the confines of their laboratory, using one of the largest, most intense lasers on the planet. **One of the most extreme astrophysical events**, Supernova explosions are the violent deaths of certain stars that **scatter elements heavier than hydrogen and helium into surrounding space**.

What

1. **Our own solar system is thought to have formed when a nearby supernova** exploded distributing these elements into a cloud of hydrogen that then condensed to form our Sun and the planets. In fact, the very atoms that make up our bodies were formed in the remnants of such an explosion.

2. Researchers from the University of Oxford and Imperial College London in the UK demonstrated their research at the week-long Royal Society Summer Science Exhibition.

3. Witnessing and getting to grips with these experiments can help people to understand the inner workings of the Universe.

4. Their '**How to make a supernova**' exhibit highlighted how powerful lasers can help us understand and appreciate the origins of the universe. The team was able to mimic some the properties of these supernovae in the laboratory by using one of the most powerful lasers on Earth.

5. **The extremes of density and temperature produced by the lasers** allow scientists to study how the supernova acts when it expands into space, and can also provide insight into how high energy particles from space are produced, how

the magnetic field in the galaxy formed, and what the interior of a giant planet might look like.

SpaceX's Dragon returns

SpaceX's Dragon cargo spacecraft returned to Earth from the International Space Station (ISS) on 3 July 2017, **bringing back the first Chinese experiment ever to visit the orbiting laboratory**. The unmanned spacecraft splashed down in the Pacific Ocean, about five hours after leaving the space station. **It wrapped up SpaceX's 11th contracted cargo re-supply mission for the US space agency NASA**.

What

1. Good splashdown of Dragon confirmed completing **first re-flight of a commercial spacecraft to and from the @Space_Station**.

2. **Dragon is returning more than 1,860 kg of cargo**, including science samples from human and animal research, biotechnology studies, physical science investigations and education activities.

3. One of the science samples was the **first-ever Chinese experiment brought to the space station**, which is fully commercial, under an agreement with Houston-based NanoRacks, which offers services for the commercial utilisation of the orbiting laboratory.

4. The experiment from the Beijing Institute of Technology was aimed at studying the effects of the **space radiation environment on DNA and the changes in mutation rate**.

'Tmall Genie'

China's Alibaba Group Holding Ltd launched on 6 July 2017 a cut-price voice assistant speaker, similar to **Amazon.com Inc's "Echo"**, its first foray into **artificially intelligent home devices**. The "Tmall Genie", named after the company's e-commerce platform Tmall, costs 499 yuan ($73.42), significantly less than western counterparts by Amazon and Alphabet Inc's Google, which range from $120 to $180. These devices are activated by voice commands to perform tasks, such as checking calendars, searching for weather reports, changing music or **control smart-home devices**, using internet connectivity and artificial intelligence.

What

1. China's top tech firms have ambitions to become world leaders in **artificial intelligence as companies**, including Alibaba and Amazon, increasingly compete for the same markets.

2. Baidu, China's top search engine, which has invested in an artificial intelligence lab with the Chinese government, recently launched a device based on its own **siri-like "Duer OS"** system.

3. The **Tmall Genie is currently programmed to use Mandarin** as its language and will only be available in China. It is activated when a recognised user says "Tmall Genie" in Chinese.

4. In a streamed demonstration, engineers ordered the device to buy and deliver some Coca Cola, play music, add credit to a phone and activate a smart humidifier and TV.

5. **The device, which comes in black and white**, can also be tasked with purchasing goods from the company's Tmall platform, a function similar to Amazon's Echo device.

6. Alibaba has invested heavily in offline stores and big data capabilities in an effort to capitalise on the entire supply chain as part of its retail strategy, increasingly drawing comparisons with similar strategies adopted by Amazon.

7. It recently began rolling out unstaffed brick-and-motor grocery and coffee shops, using QR codes that users can scan to complete payment on its Alipay app, which has over 450 million users.

RailCloud launched

The Indian Railways has launched **RailCloud**, a virtual server with an inbuilt security system that will enable faster connectivity at a reduced cost. Rail Cloud works on **popular Cloud computing system**.

What

1. Cloud computing is an **emerging technology for faster and on demand commensurate deployment of server resources** which results in reduced cost.
2. It has been developed by rail PSU RailTel as part of Railways strategic IT initiative, **IR—OneICT**.
3. It is aimed at optimising server the resources and its management.
4. Its technology enables **maximising the usage of available server and storage**.
5. It can accommodate bigger data and more applications within same server space.
6. The technology will pave the way for swifter deployment of application.
7. It subsumes existing infrastructure and resources available with railway for ensuring that expenditure is **minimized in acquiring new resources**.
8. This makes the **system suitable to meet the higher demand** at peak hours with less expenditure.
9. It is also equipped with security features as per the latest Government guidelines.
10. Its server resources are constantly scaled up or down as per the number of users logged on to the system and it ensures a **better user experience**.
11. It covers all management related and other services like human resources, signal assets, freight and logistics, health and hospital and energy among others.
12. **Nivaran-Grievance Portal Nivaran-Grievance Portal** was also launched. It is the first IT application on the RailCloud.
13. It serves as a platform for resolution of service-related grievances and of serving and former railway employees.
14. The existing application hosted on a conventional server was migrated on RailCloud.
15. It will save significant revenue and improve user experience at same time.

Mars soil may be toxic to alien life

The surface of Mars contains a toxic cocktail of chemicals that can **wipe out living organisms**, according to a study that has dealt a blow to the hopes of finding alien life on the red planet. Researchers at the University of Edinburgh in the UK investigated the behaviour of chemical compounds, called perchlorates, which are found on the surface of Mars.

What

1. They found that, when exposed to **ultraviolet (UV) light in environmental conditions mimicking those on Mars**, the chemicals can kill bacteria commonly carried by spacecraft.
2. The study also suggests that the effect of perchlorates can be compounded by two other types of chemicals found on **Mars' surface, iron oxides and hydrogen peroxide**.
3. In experiments in which all three were present, the combination led to a more than 10-fold increase in death of bacterial cells compared with perchlorates alone.
4. Scientists have speculated on the influence that perchlorates may have on the habitability of the planet, since their discovery there several years ago.
5. Researchers investigated the potential **reactivity of perchlorates and their effect on Bacillus subtilis, a bacterium found on spacecraft and common in soils and rocks**.
6. Their experiments showed that when magnesium perchlorate was exposed to UV radiation similar to that on Mars, it became capable of killing bacteria much more effectively than UV light alone.
7. At concentrations of perchlorate similar to those found on the Martian surface, cells of B subtilis quickly died.

8. Although the **Martian surface has been suspected for some time to have toxic effects**, the latest study suggests that it may be highly damaging to living cells.

MISCELLANEOUS

Achal Kumar appointed as CEC

Election Commissioner **Achal Kumar Joti was 4 July 2017 appointed as the next chief election commissioner (CEC)** suceeding Nasim Zaidi. **64-year-old Joti**, who was the chief secretary of Gujarat when Prime Minister Narendra Modi was the chief minister, will take over as the head of the Election Commission on July 6, a notification issued by the law ministry said. Zaidi will demit office on 5 July 2017.

What

1. **Joti, a 1975-batch Indian Administrative Service (IAS) officer**, had joined the three-member poll panel as an election commissioner on May 8, 2015 and would be in office till January 17 next year.
2. He retired as the Gujarat chief secretary in January 2013.
3. A CEC or an EC can have tenure **of six years or hold office till the age of 65 years**, whichever is earlier.
4. Joti, who will be the **21st CEC, has also served as the Gujarat vigilance commissioner** and worked in various capacities in the state, including as the chairman of the Kandla Port Trust between 1999 and 2004 and the managing director of the Sardar Sarovar Narmada Nigam Ltd (SSNNL).
5. He was also the secretary in the industry, revenue and water supply departments in the state.
6. The government is also soon expected to appoint one more Election Commissioner to fill up the vacancy caused by Zaidi's retirement.
7. **Om Prakash Rawat is the other election commissioner in the poll panel**.

e-Inner Line Permit programme

Arunachal Pradesh has launched the **e-Inner Line Permit (eILP) programme as a digital step** for hassle-free entry of domestic visitors to the frontier state. Chief Minister Pema Khandu on 30 June launched a web portal that will assist visitors to apply for and obtain the mandatory **ILP, online from anywhere in the country**. Conceptualised by the State Council for IT and e-Governance and developed by **Bohniman Systems Private Limited** for the department of Information Technology, the system is feature-rich and will allow online submission of required documents, photograph and payment by a visitor or group of visitors to the state.

What

1. **The system is mobile-responsible** and hence the ILPs to be issued now will be paperless, an official release on 1 July 2017 said.
2. The hassle-free and paperless system will lead to significant increase in number of visitors to the state, the release said.
3. He emphasised on providing training to the personnel at designated offices of resident commissioners, deputy resident commissioners and deputy commissioners so that they are familiar with the system and can issue ILPs promptly.
4. **As the issued ILP will now have bar and QR codes for verification.**
5. Visitors will also have the option to avail ILPs at entry gates and other designated places on payment of fees.

Global Cybersecurity Index 2017

Singapore has a near-perfect approach to cybersecurity, but many other rich countries have holes in their defences and some poorer countries are showing them how it should be done, a UN survey showed on 5 July 2017. Wealth breeds cybercrime, but it does not automatically generate cybersecurity, so governments need to make sure they are prepared, the survey by the **UN International Telecommunication Union (ITU)** said.

There is still an evident gap between countries in terms of awareness, understanding, knowledge and finally capacity to deploy **the proper strategies, capabilities and programmes**, the survey said.

What

1. The **United States came second in the ITU's Global Cybersecurity Index**, but many of the other highly rated countries were small or developing economies.
2. The **rest of the top 10 were** Malaysia, Oman, Estonia, Mauritius, Australia, Georgia, France and Canada. Russia ranked 11th.
3. **India was 23th**, one place ahead of Germany, and China was 34th.
4. The ranking was **based on countries' legal, technical and organisational institutions, their educational and research capabilities**, and their cooperation in information-sharing networks.
5. **Cybersecurity is an ecosystem where laws, organizations, skills, cooperation and technical implementation need to be in harmony to be most effective.**
6. The degree of interconnectivity of networks implies that anything and everything can be exposed, and everything from national critical infrastructure to our basic human rights can be compromised."
7. The crucial **first step was to adopt a national security strategy**, but 50% of countries have none, the survey said.
8. Among the countries that ranked higher than their **economic development was 57th-placed North Korea**, which was let down by its "cooperation" score but still ranked three spots ahead of much-richer Spain.
9. The smallest rich countries also scored badly—Andorra, Liechtenstein, Monaco and San Marino were all well down the second half of the table. The Vatican ranked 186th out of 195 countries in the survey.
10. But no country did worse than **Equatorial Guinea, which scored zero**.

India trying to join Wassenaar Arrangement

India is actively trying to join the export control regimes, **the Wassenaar Arrangement and Australia Group**, notwithstanding China's attempts to stonewall its membership bid to enter the Nuclear Suppliers Group (NSG). An official said work on applying for a membership of the Wassenaar Arrangement had begun. An entry into the two groups can help strengthen **India's non-proliferation credentials** and build up a strong case for it as the country seeks an entry into the 48-member NSG.

What

1. The government also recently **approved SCOMET (Special Chemicals, Organisms, Materials, Equipment, and Technologies) items**, mandatory under the **Wassernaar Arrangement**. Through the revised list of items, India also seeks to send a message about its larger commitment to non- proliferation.
2. Twenty-eight states are common members of the Missile Technology Control Regime (MTCR), the Australia Group, the Wassenaar Agreement and the NSG—the four non-proliferation groups.
3. **India is a member of the 35-member MTCR**, which it joined last year.
4. Membership in Wassenaar and Australia Group would give India a chance for a closer interaction with member- states and also hold up its credentials, despite not being a signatory to the Non-Proliferation Treaty (NPT).
5. Membership to these groups is by consensus, as in the NSG. India had applied for NSG membership last year, but its bid is primarily being blocked by China, which maintains that the signing the NPT is a prerequisite for entry into the bloc. Neither China nor Pakistan is a member of either of the two groups.

Men-only island gets UNESCO nod

A **men-only island in Japan** where **women are banned and male visitors must bathe naked in the sea before visiting its shrine**, has been declared a UNESCO World Heritage site. The **tiny landmass of Okinoshima is permanently manned by a Shinto priest** who prays to the island's goddess, in a tradition that has been kept up for centuries.

Limited numbers are permitted to land on the island in the Sea of Japan (East Sea) — this year it was 200 — for a yearly festival that lasts just two hours, but they must adhere to strict rules.

What

1. The ban on female visitors specifically "has nothing to do with discrimination against women. **It is considered dangerous for women to travel by sea to get to the island** and the shrine will not change the centuries-old rule.

2. The island, which sits off the northwest coast of Kyushu, the southernmost of Japan's four main islands, was an important window for foreign trade in Japan since ancient times, forming part of a trade route that linked the archipelago to the Korean peninsula and China.

3. **UNESCO's heritage committee considered 33 sites for the prestigious status at its annual gathering in Poland**. It also accepted Taputapuatea, a portion of the "Polynesian Triangle" in the South Pacific thought to be the last part of the globe settled by humans, to the list.

4. It also added Britain's Lake District — muse for artists from William Wordsworth to Beatrix Potter — and the Valongo wharf in Rio de Janeiro where slaves from Africa first arrived in Brazil.

First time import crude oil from US

India, the world's third-largest oil importer, will import crude oil from the United States for the first time after **Indian Oil Corp** bought a cargo that will be delivered in October. The purchase comes after Prime Minister Narendra Modi's visit to the US in June when President Donald Trump said his country looked forward to exporting more energy products to India.

What

1. **IOC bought 1.6 million barrels of US Mars crude**, a heavy, high-sulphur grade, and 400,000 barrels of Western Canadian Select that will be delivered onboard a Very Large Crude Carrier.

2. **PetroChina was awarded the tender to sell the cargoes** and is expected to load the oil off the US Gulf Coast. The cargo was priced on a delivered ex-ship basis, which is "very competitive" to that of Basra Light.

3. **IOC had to obtain special permission from the shipping ministry to buy the cargo on a delivered basis** as local regulations favour the use of Indian flagged carriers for imports.

4. **India is the latest Asian country to buy US crude after South Korea, Japan, China, Thailand, Australia and Taiwan** as the countries seek to diversify oil imports from other regions after the OPEC cuts drove up prices of Middle East heavy-sour crude, or grades with a high sulphur content.

5. Indian refiners are seeking these heavy, high-sulphur grades as feedstocks after modifications at their plants make it easier to process these types of crudes, which typically sell at a lower cost relative to other oil types. The US could become an alternative source for the Indian companies for these grades.

6. **A second Indian refiner Bharat Petroleum Corp Ltd also planned to buy its first ever US crude oil cargo** and has issued a purchase tender.

Unified Commanders' Conference 2017

The **Unified Commanders' Conference for the year 2017** was commenced on 10 July 2017 at New Delhi. The Conference **provides a platform for discussions at the apex level on all 'Joint' issues amongst the three Services**. The Conference was attended by the RM, RRM, NSA, the Service Chiefs and other senior military and civil officials of the Ministry of Defence and Tri-Service Organisations/Institutions.

What

1. RM, in his address to the Conference stated that **there is a deep sense of appreciation in every citizen of the country** and the Govt for the exemplary manner in which the Services have been conducting themselves.

2. He expressed his satisfaction in the way the Armed Forces have been handling the multiple challenges to security. He also appreciated the strong thread of 'Synergy' in the interactions during the Conference. He stated that there is a clear realisation in the Govt that issues relating to the Services cannot be kept pending for long and the Govt will be decisive in its approach.

3. He also assured the Armed Forces that with resource availability increasing within the Indian economy, Capital expenditure will be a priority area.

System to remove oil spills from sea

Scientists have developed a **simple, cheap and environment-friendly system** that can **effectively remove crude oil from sea** that **can pollute and even destroy marine ecosystems**. Marine oil spills are disasters that cannot be completely avoided as long as we drill for oil or transport it across the ocean, researchers said. An effective measure would be to remove oil slicks by absorption into a separable solid phase.

What

1. Now, **scientists from the Indian Institute of Science, Education and Research (IISER) in Thiruvananthapuram**, Kerala have found that the congealed oil created a rigid gel within impregnated cellulose and scooping the particles out is possible.

2. **Kana M Suresan and Annamalai Prathap from IISER** have developed and tested an intriguingly simple strategy. Combining absorption and gelation processes, they tightly bound the **oil to a porous matrix and then simply scooped the solid particles out of the water**. Even full with the oil, the granules did not sink but remained at the surface.

3. The **scientists also demonstrated that squeezing of the congealed granules can help recover the spilt oil**. The scientists chose cellulose as an environment friendly, cheap and porous carrier matrix and impregnated it with a so-called oleogelator, a cheap organic compound. This simple impregnation step proved to be key in converting the cellulose to an effective oil-absorbing and recycling system.

4. **Gelation occurs because the gelator molecules get dissolved in the oily phase**, and then they form a three-dimensional fibre network through hydrogen bonding.

5. The oil becomes trapped in this fibrillar network to form a rigid gel. Thus, gelation turns the liquid oil phase into a solid one, which can be simply scooped out. The other advantage of impregnation is that the gelator renders the cellulose matrix hydrophobic. It did not suck in water as naked cellulose does.

SC extends stay on cattle sale notification

The Supreme Court on 11 July 2017 **extended a stay, granted by Madras High Court on May 23 notification by the Centre** that **banned buying of animals from markets for slaughter, to the whole country**. The SC said the fresh rules even after the amendment could not be implemented without a window period of three months as markets were to be notified by the states only.

What

1. Senior advocate **Kapil Sibal, representing a batch of PIL petitioners** including **Mohammed Abdul Faheem Qureshi**, President of Hyderabad-based **All India Jamiatul Quresh Action Committee**, submitted that in view of the notification, people were afraid to sell their cattle.

2. The court prima facie agreed to the plea, observing, **livelihood of people cannot be subjected to uncertainties**.

3. **The PILs had contended the rule unconstitutionally prohibited the sale of cattle for slaughter** imposing absolute ban on the purchase of the animal and violated the fundamental rights of freedom of choice of food. The rule also deprived the persons from doing permissible trade of breeding and raring of animals.

4. It was further contended the **regulations framed by the Union government under the Prevention of Cruelty to Animals Act, 1960**, tend to regulate live

stock markets with an intention of preserving protecting and improving stocks, though the legislation on the fields was earmarked for the state legislature.

5. It also pointed out that states of Karnataka, Kerala, Tripura and West Bengal had already said they would not implement the rules in "**the wage of outrage against it for impacting the poor dalits and Muslims**".

6. The complete ban of sale or purchase or resale of animals, would cast a huge economic burden on the farmers, cattle traders who find it difficult to feed their children today but would be required to feed the cattle as it is an **offence under the Act of 1960 to starve an animal or failure to maintain it** and would also give way for Cow Vigilantes to harass farmers and cattle traders under the blessing of the impugned regulations," the petitioners apprehended.

7. Besides, **the regulation was contrary to Section 28 of the Act** which **permitted killing of animals for religious purposes**.

8. It also offended the right to freedom of religion and conscience and thus was arbitrary, inconsistent and outside the purview of parent act, the petitioner claimed.

Road connectivity projects approved

The **Cabinet Committee on Economic Affairs approved the upgradation and widening of 65 km of Imphal-Moreh Section of NH-39 in Manipur**. The project cost is estimated at Rs. 1,630.29 crore. The project will **improve connectivity between Imphal with the eastern part of the state**. Based on the existing and projected traffic requirements the **NH-39 will be widened to 4 lane between Lilong village and Wanginj village**, while the stretch between Wanginj village to Khongkhang will be upgraded to 2 lane with paved shoulder.

What

1. **The project is being developed with ADB's loan assistance under the South Asian Sub-Regional Economic Cooperation (SASEC) Road Connectivity Investment Program**. The project corridor is also a part of the Asian Highway No. 01 (AH01).

2. **Manipur being a landlocked state** with almost 90 per cent of the area under difficult terrain, currenttly has only road transport as a means of mass transport system within the state.

3. The project corridor is also a part of the **Asian Highway No. 01 (AH01) and acts as India's Gateway to the East**. Thus, trade, commerce and tourism in the region will get a boost.

4. Government of India has notified an **Integrated Custom Post (ICP) at Moreh**. The development of this project is essential to support the increased traffic volume on account of the development of the ICP.

5. Besides socio-economic development the project will also reduce the average travel time along the project road by nearly 40 per cent.

6. The new features of road safety namely **vehicular underpasses, crash barriers, road signs and and markings, service roads for segregation of slow and high moving traffic, truck lay-bys, bus-bays**, will help in greatly reducing accidents. Improved highways and lesser travel time will lead to savings in terms of fuel cost.

First ever India will host international Theatre Olympics

The **51-day carnival of theatre**, beginning February 17 next year, will simultaneously be held in **Delhi, Mumbai, Kolkata, Bengaluru, Chennai**and 10 other cities across India.

The **Theatre Olympics is an international festival** that brings together productions of well-known theatre practitioners from around the world. It was established in Delphi, Greece, in 1993 at the initiative of noted Greek theatre director Theodorus Terzopoulus.

What

1. It gives me immense pleasure to announce that India will be hosting the eighth edition of Theatre Olympics 2018. While best of the theatre productions from around the world will be showcased during the mega event, India will get an

      opportunity to showcase the richness and diversity of its culture to the world through the international carnival of theatre.

2. The **National School of Drama (NSD)** will organise the mega international event in coordination with the Union Culture Ministry.

3. A national level committee will soon be set up for shortlisting of the groups and plays.

4. **Established in 1993, the Theatre Olympics is the foremost international theatre festival**, presenting the finest productions of well-known theatre practitioners from around the world.

5. **The first country to host the Theatre Olympics was Greece in 1995**. Japan hosted the second edition in Shizuoka in 1999, followed by Russia in 2001.

6. **In 2006 the Olympics were held in Istanbul**, Turkey and four years later, in 2010 in Seoul, South Korea.

7. China hosted them in Beijing in 2014 and in 2016 the 7th Theatre Olympics were held in Wroclaw, Poland.

8. India is all set to join this illustrious list as it plays host to the 8th edition of this global event.

Indian jails have highest undertrail populations

Indian jails have one of the **highest undertrial populations in the world**, a new report has said as it claimed that central and state governments have failed to respect their fair trial rights. The study '**Justice under Trial: a Study of Pre-Trial Detention in India**' by Amnesty International India said the country's undertrial population is estimated to be the 18th highest in the world and the third highest in Asia.

What

1. India has one of the highest undertrial populations in the world. **As of December 2015, 67% of prisoners in India's prisons were undertrials** – people who were awaiting trial or whose trials were still ongoing, and who have not been convicted.

2. In other words, **there are twice as many undertrials in India's prisons as there are convicts**," the report said.

3. In contrast in the US, which is estimated to have the highest incarceration rate in the world, only **20% of prisoners are undertrials**.

4. Noting that safeguards under law to protect undertrials are regularly ignored across the country, It said "few prisons appear to know how to accurately determine which undertrials are eligible for release **under section 436A**.

5. Legal aid lawyers do not visit prisons regularly. A shortage of police escorts leads to thousands of undertrials not being produced in court for their hearings, effectively prolonging their detentions.

6. Most prisons in India are overcrowded, partly as a result of excessive undertrial detention. **The average occupancy rate in Indian prisons is 114%**, and is as **high as 233.9% in states such as Chhattisgarh**, it said quoting a National Crime Records Bureau (NCRB) report.

7. The overuse of undertrial detention effectively ends up punishing people before they are convicted, and makes a mockery of their right to be presumed innocent until proven guilty. Prolonged undertrial detention can also increase the risk of torture or other ill-treatment.

8. It claimed that the state and central governments have "failed to respect" the fair trial rights of undertrial prisoners.

Indian government tops global index

Indians have the most confidence in their government, a report published by a major economic cooperation organisation said. The latest edition of the **OECD's Government at a Glance report** states that **73 per cent Indians have faith in the Narendra Modi led NDA coalition**, the highest in the world.

What

1. **India is followed by the Canadian government** headed by Prime Minister Justin Trudeau, which has the confidence of 62 per cent citizens.
2. **Turkey, which witnessed a failed coup attempt in 2016, is in third place** with 58 per cent of the populace placing its trust in the Erdogan government.
3. **Russia and Germany rounded off the top 5**, with confidence levels at 58 per cent and 55 per cent respectively.
4. The United States government led by President Donald Trump secured only **30 per cent of the peoples' confidence**. In the United Kingdom, which is in the midst of a bitter 'Brexit' following a divisive referendum last year, trust in the Theresa May government stands at 41 per cent, the report collated by the OECD said.
5. The recent impeachment of President Park Geun-hye over a corruption scandal has reduced confidence in the South Korean government to 25 per cent.
6. Greece, which had to bear the brunt of the EU migration crisis while struggling with a failing economy, is at the **bottom of the table with a mere 13 per cent of the people's confidence**.
7. Government trust levels are generally determined by whether or not people consider their government stable and reliable, if it's able to protect its citizens from risk and whether it can effectively deliver public services.
8. According to the report, the word **"Trust" can be defined as "positive perception about the actions of an individual or an organisation"**.
9. The report further says that the **"positive perception" is largely determined "by subjective assessment of individuals"**.
10. The report adds that trust in government may lead to "effectiveness of government" and "economic development". "Trust in government leads to greater compliance with **regulations and the tax system**, facilitates social and political consensus, enhances the acceptance of policies that call for short-term sacrifices by citizens, and mobilises citizen engagement to enable open and inclusive governance processes.
11. The report cites **data collected by Gallup World Poll (GWP)**, which collects evidence from perception surveys to measure the level of trust on an annual basis for OECD countries.
12. The data is collected "**based on proportional stratified probability sampling**" and a sample size of around 1000 citizens for most countries is used for the purpose, the report says.
13. It further cites the limitation on its research method that the data is measured on the basis of a single question of whether the people have trust or not in their national government, but does not take any particular areas of national governance in its ambit of research.

PETN explosive inside UP Assembly

A packet containing **explosive material was recovered from the Uttar Pradesh Assembly**, was later confirmed as **Pentaerthritol Tetranitrate (PETN)**, one of the most dangerous plastic explosive, "The fact that PETN was found at the spot hints at possibility of a terrorist activity." **Weighing around 150 gm**, the packet was found under the seat of Samajwadi Party MLA Manoj Pandey inside the Uttar Pradesh Assembly. Following the incident security officials rushed to the Assembly and the recovered packet was then sent to a forensic laboratory for tests.

What

1. **Pentaerythritol tetranitrate, or PETN**, is a **highly explosive organic compound belonging to the same chemical family as nitroglycerin and nitrocellulose**.
2. It is a sensitive compound and is easily detonated by an appropriate mechanical shock and is one of the most powerful explosive materials known.

3. **PETN was first prepared and patented in 1894 by the explosives manufacturer Rheinisch-Westfalische Sprengstoff in Germany**. It was introduced as a commercial explosive after World War I.

4. The deadly explosive is valued in **both military and civilian applications for its shattering force and efficiency**. Mixed with the extremely powerful compound RDX in an appropriate solvent, PETN forms a plastic explosive mixture known as Semtex.

5. **PETN is a valued weapon in terrorist bombings**, because of its explosive power, its ability to be molded and fitted into unusual packages, and the difficulty of detecting the organic compound with X-ray and other conventional equipment.

Raipur Airport Ranked First

Raipur's **Swami Vivekananda Airport** was once again **ranked first in Customer Satisfaction among 49 airports in the country**. Raipur Airport achieved 4.84 score on a five point scale index in the latest CSI survey conducted by an independent agency for the period of January-June 2017, followed by **Udaipur, Amritsar and Dehradun airports** which have scored 4.75, 4.74 and 4.73 respectively.

What

1. **Airport Authority of India** makes continuous efforts to improve the services and passenger facilities at its airports, and this has placed it amongst the best service providers in the world.

2. **Customer Satisfaction is one of the key performance objectives of AAI** which is evaluated through Customer Satisfaction Survey conducted by an independent agency commissioned by AAI.

3. The survey covers a wide range of parameters like transportation, parking, passenger facilities and cleanliness etc. The integrated terminal building of Raipur was inaugurated in 2012.

4. High level maintenance of infrastructure and passenger facilities, the green ambience, state-of -the- art technology and courteous staff ensuring passenger satisfaction has resulted in Raipur getting this recognition for the **third consecutive time in the past two years**.

Global Migration Potential report

India has the second highest number of adults planning to migrate to other countries with the **US and the UK among the most favoured destinations**, according to a report by the UN migration agency. The UN migration agency, **the International Organisation for Migration (IOM)**, in its report '**Measuring Global Migration Potential 2010-2015**', which analyses people's migration intentions globally for the period 2010-2015, noted that globally **1.3 per cent of the adult population or 66 million people** said they were planning to migrate permanently within the next 12 months.

What

1. **The most popular destination for those planning to migrate is the US** followed by the UK, Saudi Arabia, France, Canada, Germany and South Africa.

2. Half of those planning to migrate live in just 20 countries, led by Nigeria and followed by India, Congo, Sudan, Bangladesh and China.

3. At 4.8 million people, **India has the highest number of adults planning and preparing to migrate** - 3.5 million people who are planning and 1.3 million who are preparing.

4. For Nigeria, the number stands at 5.1 million people, Congo 4.1 million, and China and Bangladesh at 2.7 million each.

5. The findings by **IOM's Global Migration Data Centre (GMDAC) shows** that less than half a per cent of adults worldwide or 23 million people are actively making preparations to migrate abroad. One in three adults surveyed plans to migrate to a developing country.

6. West Africa, South Asia and North Africa are the regions with the largest migration potential.

7. The study is based on international survey data by the **Gallup World Poll**.

8. The share of the adult population planning to migrate abroad has increased moderately at the global level but more rapidly in certain regions. Adults planning and preparing to migrate are more likely to be male, young, single, living in urban areas and more likely to have completed at least secondary education.

9. There are many reasons why a migration plan may never be realised including policy restrictions, lack of resources or a change of heart.

Indians get most spam calls in the world

Spam calls are on the rise. A study of **20 countries has revealed that Indians received the most number of spam calls in 2017**. Research by Truecaller, an app which has over 250 million users globally, showed that an Indian smartphone user received over 22 spam calls a month, or almost a call a day. **The US and Brazil came second** with over 20 calls per user each month.

What

1. **Over half of India's spam calls (54%) originated from telecom operators**. Many of these operators are seeking to provide special offers for free data, or unlimited calls. Which doesn't sound so bad - until you get bombarded by them," the report says.

2. **Nuisance calls— including unwanted, harassment and pranks— stake claim to 20% of the calls**. Among the other spam calls Indians receive are 13% from telemarketers, 9% from financial services while 3% are related to insurance and scams.

3. This is despite the fact India's regulatory system includes a **do not disturb (DND) registry** as well as an **Unsolicited Commercial Communication regulation**.

4. Other countries are not much better off either. Unwanted calls to Americans have risen sharply by 20% in the last two months. Telecom operators are the top spammers (33%) in Brazil, with calls seeking to provide special offers for data and calling plans.

5. **The second biggest spammers in Brazil are debt collectors** though sometimes these calls can be fraudsters pretending to collect money for illegitimate reasons.

6. Chile, South Africa and Mexico are next amongst spam-plagued countries. The data for the report was aggregated anonymously from incoming calls that were either marked as spam by users or had automatically been flagged by Truecaller.

New maps of Pluto, Charon

To mark the two-year anniversary of **New Horizons' historic Pluto flyby**, NASA has released **new maps of Pluto and its largest moon, Charon**, revealing their complex terrain.

On July 14, 2015, NASA's New Horizons spacecraft made its historic flight through the Pluto system – providing the **first close-up images of Pluto** and its moons and collecting other data that has transformed our understanding of these mysterious worlds on the solar system's outer frontier.

What

1. Scientists are still analysing and uncovering data that **New Horizons recorded and sent home after the encounter**.

2. On the two-year anniversary of the flyby, the team is unveiling a set of detailed, high-quality global maps of Pluto and Charon.

3. **The complexity of the Pluto system** — from its geology to its satellite system to its atmosphere — has been beyond our wildest imagination.

4. These new maps from the landmark exploration of Pluto by NASA's **New Horizons mission in 2015** will help unravel these mysteries and are for everyone to enjoy.

5. The spacecraft is now 5.7 billion kilometres from Earth, venturing deeper into the distant, mysterious Kuiper Belt to reach its next target.

6. On New Year's Day 2019, New Horizons will zoom past a **Kuiper Belt object known as 2014 MU69**, NASA said.

UNICEF's Global Goodwill Ambassador

UNICEF on 15 July 2017 appointed **Indian-origin Canadian YouTube star Lilly Singh** as its newest Global Goodwill Ambassador. Lilly support **UNICEF's Youth4Change initiative**, a programme for youth that brings them together to support their peers and communities in taking action on issues such as **health, hygiene, child labour and gender equality**.

What

1. **The YouTuber, famous as 'Superwoman'**, said she would come up with few videos in Hindi and would try to put Hindi subtitles in her English videos to increase the reach of her vlogs and channel.

2. As the UNICEF ambassador Lilly, who has 11.9 around million subscribers on the video sharing website, will use her channel to showcase the organisation's work and urge millions of her followers to work for children's rights.

3. The 28-year-old star has also started a **new initiative on social media #GirlLove** which aims to end girl-on-girl hate.

Top 10 most influential brands

Yoga guru Ramdev promoted **Patanjali Ayurveda** has been featured among the **top 10 most influential brand in India** along with **electronic major Samsung** and **new entrant Reliance Jio**, according to a study by the global research firm Ipsos. Besides, **Google has been ranked at the top slot** while Microsoft and Facebook were ranked at number two and three, respectively.

What

1. Home grown **Patanjali and Mukesh Ambani's controlled Reliance Jio have bagged the fourth and ninth position**, respectively.

2. The Ipsos study, which **evaluates over 100 brands across 21 countries, covered more than 1,000 Indians online to assess over 100 brands**. The study involved 36,600 interviews.

3. **State Bank of India (SBI) being the only financial institution that made to the list**, moved up four ranks to take the fifth position. E-commerce player Flipkart dropped three spots to take the tenth place while Amazon climbed couple of steps to take the sixth place. Other companies that made to the list include **Samsung (7th)** and **Airtel (8th)**.

4. In the ranking list from 11 to 20, brands that bagged a place include Snapdeal, Apple, Dettol, Cadbury, SONY, HDFC Bank, Maruti Suzuki, Good day and Amul.

5. The brands are rated by the consumers on quality, experience and value, as also factors such as big marketing spends and consciously work towards increasing their brand equity were counted.

India wins gold medal at World Para Athletics

India's **Sundar Singh Gurjar (21)** won gold medal in the men's javelin throw event at **World Para Athletics Championships** held in London, United Kingdom. In the **F46 category**, Sundar recorded his personal best effort of 60.36m ahead of Dinesh Priyantha Herath (Sri Lanka) who emerged second with 57.93m, followed by defending champion Guo Chunliang (China) with 56.14m. He hails from the **Karauli district in Rajasthan**. Till November 2015, he was competing in General Category. But he had lost his left hand in an accident. After accident, he started participating in **para-athlete competitions**.

Background
The United Nations General Assembly (UNGA) had established **World Youth Skills Day in November 2014** to raise awareness about the importance of investing in youth skills development

World Youth Skills Day

The **World Youth Skills Day** is observed globally on **15 July every year** to raise awareness about the **importance of investing in youth skills development**. The day aims

to create more awareness on training and the development of skills for the youth of today and also create better employment opportunities for the youth. The Theme of this year is "**Skills for All**". It is aimed at creating awareness that everyone should have the opportunity to discover and develop their talents.

India's First women's ODI cricketer to score 6000 runs

Indian captain Mithali Raj (34) scripted history by becoming **first player in the history of women's ODI cricket to score more than 6000 career runs**. She also became all-time leading run-getter in women's ODI. She achieved the record feat against **Australia in the ICC Women's World Cup 2017** match at Bristol. She broke previous record of Charlotte Edwards (5992) in 164 innings – 16 less than Charlotte.

First State to lay down minimum qualification for poll

Rajasthan has become the first State in the country to lay down the minimum educational qualifications **for contesting elections to village cooperative societies** and various other cooperative bodies. In this regard, state government has amended **State Cooperative Societies Rules, 2003**.

What

1. The new rules **would benefit about 10,000 cooperative and agricultural credit societies**. The benefit of education will accrue to the societies as their management will go to expert hands.
2. The minimum educational qualification will be compulsory for the members of the Directorate of Board of the cooperatives to ensure the management is assigned to skilled hands.
3. The required educational qualifications **will range from Class V to Class VIII for election as members of governing boards** of various cooperative societies.
4. The minimum qualifications for the primary committee members **will be class VIII**, for district-level committees; it will be class X and graduation for the state level committee.
5. In October 2016, Rajasthan Government had enforced the **Rajasthan Cooperative Society (Amendment) Act, 2016** for making minimum educational qualification mandatory for election of the cooperative committees in the state.
6. The act mandated to frame rules to define minimum qualification. Prior to enforcing this act, state government had made minimum educational qualification mandatory in panchayat polls.

World Population Day

The World Population Day is observed across the world on **July 11** to attention on the urgency and importance of population issue. Observance of the day aims at **increase people's awareness on various population issues** such as the importance of family planning, maternal health, gender equality, poverty and human rights. The Theme of this year is "**Family Planning- Empowering People, Developing Nations**".

Background

1. The **World Population Day** was established by the then Governing Council of the **United Nations Development Programme (UNDP) in 1989**.
2. It was inspired by the public interest in Five Billion Day on July 11, 1987.
3. Later in December 1990, the United Nations General Assembly decided to continue observing World Population Day by adopting resolution to enhance awareness of population issues, including their relations to the environment and development.
4. The Day was first marked on **11 July 1990 in more than 90 countries**.

Exercise Maitree 2017 begins

A joint military training exercise **Maitree 2017 between Indian Army and Royal Thailand Army** commenced at Bakloh in Chamba district in **Himachal Pradesh**. The aim of the exercise is to build and promote closer relations while exchanging skills and experiences between the two armies.

What

1. The **Maitree series of bilateral exercises** has been one of the major defence cooperation initiatives between **India and Thailand**.

It is an annual event. The previous edition of the exercise was held at **Krabi in Thailand** in 2016.