

My Notes...

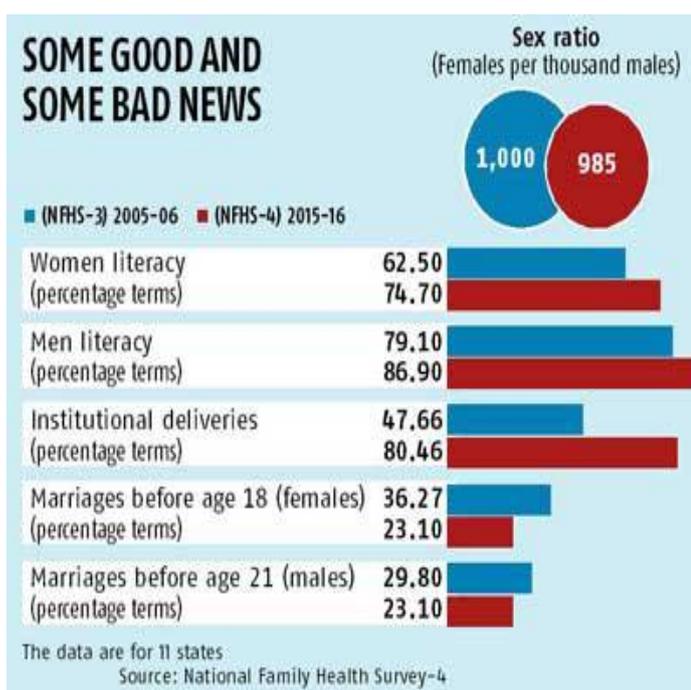
NATIONAL

National Nutrition Strategy

Niti Aayog came out with the **National Nutrition Strategy**, seeking to **put nutrition at the forefront of the narrative of the National Development Agenda**. One of the architects of Green Revolution **M S Swaminathan and Padma Shri H Sudarshan** launched the blueprint, along with Niti Aayog Vice-Chairman Dr Rajiv Kumar and Member Vinod Paul.

What

1. The Aayog made the pitch, citing the **benefit to cost ratio of 16:1 for 40 low- and middle-income countries**, adding that there is a well-recognised rationale globally for investing in nutrition.
2. The recently-published results of **NFHS-4 (national family and health survey)** reflect some progress, with a decline in overall levels of under-nutrition in both women and children.
3. **Pace of decline is far below what numerous countries** with similar growth trajectories to India have achieved. Moreover, India pays an income penalty of 9-10 per cent due to a workforce stunted during childhood.
4. The **nutrition strategy envisages a framework** under which the four proximate determinants of nutrition — **uptake of health services, food, drinking water and sanitation and income and livelihoods** — work together to accelerate decline of under-nutrition in India.
5. The **Nutrition Strategy framework envisages a Kuposhan Mukht Bharat** — linked to Swachh Bharat and Swasth Bharat.
6. The aim is to ensure states create customised State and District Action Plans to address local needs and challenges.
7. This is especially relevant in view of enhanced resources available with states to prioritise focused interventions with a greater role for panchayats and urban local bodies.
8. The strategy enables states to make strategic choices, through decentralised planning and local innovation, with accountability for nutrition outcomes.



India keeps off 'Bali Declaration'

In a show of **solidarity with Myanmar**, India refused to be a **part of a declaration adopted at an international conference in Nusa Dua** as it carried "inappropriate" reference to **violence in Rakhine state** from where 125,000 Rohingyas have fled to Bangladesh. An Indian parliamentary delegation, led by Speaker Lok Sabha Sumitra Mahajan, dissociated itself from the **'Bali Declaration' adopted at the 'World Parliamentary Forum on Sustainable Development' held in Indonesia**. "This was in view of the fact that the declaration, which was to be adopted at the conclusion of the Forum, was not in line with the agreed global principles of 'sustainable development'.

What

1. India reiterated its stance that **the purpose of convening the Parliamentary forum** was to arrive at mutual consensus for implementation of **SDGs (Sustainable Development Goals)** which requires inclusive and broad-based development processes. Therefore, the proposed reference to the violence in Rakhine state in the declaration was considered as **not consensus-based and inappropriate**.
2. The part of the declaration to which India objected spoke of the forum expressing **“deep concern on ongoing violence in the Rakhine State of Myanmar, amongst others...”**
3. India argued that specifying a particular country is unjustified as **this Forum is focussed on SDGs (Sustainable Development Goals)** and inclusive development for all countries based on cooperative and collaborative approach to achieve the 2030 Agenda for the world.
4. India said, “Never before **‘country-specific’ issues have been included in the declaration** as these dilute the objective of these Forums which require unity and focussed efforts of all the countries.

Human Capital Index 2017

India has moved up two spots on the World Economic Forum’s (WEF) Human Capital Index 2017. India has been **ranked 103rd of 130 countries** up from 105th the year before. **Norway leads the latest rankings**, followed by **Finland, Switzerland, the US and Denmark**. India’s poor performance on the index places it behind most other emerging economies such as Brazil (77th), Indonesia (65th) and other South Asian countries such as Sri Lanka (70th) and Nepal (98th). The country ranks even lower than Kenya (78th), Myanmar (89th) and Ghana (72nd).

What

1. The **WEF index measures a country’s performance on four key areas** of human capital development: **capacity**, which is a function of past investments in education; **deployment**, which measures the application and accumulation of skills through work; **development**, which takes into account the education of the next generation of the workforce and the continued skilling of labour force, and **know-how**, which measures the breadth and depth of specialised skills use at work.
2. Of the four areas, India scores the highest in development, followed by know-how.
3. The country’s comparatively better performance on development is large because of a higher score on secondary enrollment gender gap and surprisingly on the quality of the education system.
4. The country’s performance on the **latter is based on an executive opinion survey carried out by the WEF in 2016-17**, which asks participants how well does the education system in their country meets the needs of a competitive economy.
5. On the know-how sub-index, the country fares better largely due to higher scores on economic complexity and availability of skilled employees.

India related Facts

1. In **terms of development of skills needed for the future India ranks 65th**.
2. It ranks lowest (last) in world when it comes to **employment gender gap**.
3. It also ranks **low 110th in educational attainment** (primary education attainment among 25 -54 year olds) and low deployment of its human capital, meaning the skills available are not getting put to good use.
4. It **ranks 118 for labour force participation** among the key 35-54 year old demographic, means that too many Indians are engaged in informal or subsistent employment.

6. While the former is a measure of the degree of sophistication of a country's "productive knowledge" that can be empirically observed in the quality of its export products, performance on the latter is based on an executive opinion survey carried out by the WEF in 2016-17.

Wood is Good Campaign

The **Union Ministry of Environment and Forests and Climate Change (MoEFCC)** has launched "Wood is Good" Campaign under Partnership for Land Use Science (Forest-Plus). It was launched on sidelines of two-day conference on "Sustainable landscapes and forest ecosystems: Theory to Practice" in New Delhi.

What

1. The purpose of campaign is to promote wood as climate-friendly resource and substitute to materials like steel and plastic as it is carbon neutral unlike others materials which leave carbon footprint in their production.
2. **Partnership for Land Use Science (Forest-Plus)** is joint programme of **United States Agency for International Development (USAID)** and MoEF&CC to strengthen capacity for REDD (Reducing Emissions from Deforestation and Forest Degradation) implementation in India.
3. It brings together experts from India and US to develop technologies, tools and methods of forest management to meet technical challenges of managing forests for health of ecosystem, biodiversity, carbon stocks and livelihood.

What is the REDD

1. The REDD Programme is collaborative programme of **Food and Agriculture Organization (FAO)**, **United Nations Development Programme (UNDP)** and **United Nations Environment Programme (UNEP)**.
2. It was created in 2008 in response to UNFCCC decisions on Bali Action Plan and REDD at COP-13.
3. Its goal is to reduce forest emissions and enhance carbon stocks in forests while contributing to national sustainable development.
4. REDD should not be confused with "REDD+", a voluntary climate change mitigation approach that has been developed by Parties to UNFCCC.
5. Thus, REDD is a multilateral body that partners with developing countries to support them in establishing technical capacities needed to implement REDD+ and meet UNFCCC requirements for REDD+ results-based payments.

Country's first Hyperloop

The **Los Angeles-based Hyperloop Transportation Technologies (HTT)** has signed a Memorandum of Understanding (MoU) with the **Andhra Pradesh government to develop a 'superfast' short-distance transport facility** between **Vijayawada and the state's upcoming capital, Amaravati**. The project will employ HTT's patented technology to bring down travel time to less than 5 minutes.

What

1. During the initial phase of the project, **HTT will conduct a six-month long feasibility study from October**. The firm will subsequently introduce its **Hyperloop Transportation System** for the first time in India as the project enters Phase 2. According to the state government, the project would take off from Amravati.
2. According to the **Andhra Pradesh Economic Development Board (APEDB)**, the project could shape the future of transportation within the state. By collaborating with Hyperloop, **Amaravati is embracing a prototype for the mobility of tomorrow**.
3. **HTT is among the few companies to offer the Hyperloop Transportation System that is based on magnetic levitation**. Other than HTT, Tesla and the Elon Musk-owned Boring Company are actively involved in providing similar solutions.

4. The company will be **partnering with the state government to build regulatory standards** necessary for the safe and efficient operation of the technology in India. For this, **HTT plans to take inputs from various local stakeholders as well.**
5. HTT was co-founded by **CEO Dirk Ahlbom** and chairman Gesta in 2013 and has a large design and execution team consisting of more than 800 engineers, besides drawing support from 40 other corporate and university partners.

No-fly list introduced

Unruly fliers will land in a **national no-fly list** from now on that can **extend upto life time for offences ranging from verbal abuse to life threatening behaviour.** The government on 8 September 2017 unveiled **the changes made to Civil Aviation Requirement (CAR)** to enable the country to promulgate the **national no-fly list**, which it said is **"unique and first of its kind in the world".**

What

1. The new rules **provide graded punishment for offences** which are **categorised into three levels.**
2. One will end up in the no-fly list for upto three months if the passenger is found of **violating Level 1 (unruly behaviour - verbal) offences** like disruptive behaviour, physical gesture and verbal abuse.
3. A flier who commits a **Level 2 offence (physical behaviour) will be banned for up to six months.**
4. The offender will end up in the list for **"two or more years without limit" if he commits a Level 3 offence which is categorised as life-threatening behaviour** like murderous assault, choking and damaging aircraft operating system among others.
5. For repeat offenders, the person will be banned for twice the period of previous ban. These provisions are airline specific. An airline can ban a passenger but others can continue to fly the passenger if they desire so
6. The amendments to the existing CAR on **'Handling Unruly/Disruptive Passengers'** came following the incident involving Shiv Sena MP Ravindra Gaikwad who repeatedly slapped an Air India manager in April.
7. The no-fly list provisions are applicable to every passenger. **There are no exemptions.**
8. The complaint of unruly behaviour should be **referred to an internal committee set up by the airline** have headed by a retired district and sessions judge with a representative each of another airline and passenger association.
9. This **panel should decide the matter in 30 days** and till such time, airline can impose ban on passenger from flying for 30 days. In case the committee fails to take a decision in 30 days, passenger will be free to fly.
10. If any party is aggrieved with the decision, they can approach a government-appointed panel headed by a retired High Court judge, representative of airline who is not below the rank of Vice President and representative of passenger association or consumer forum.



INDRA 2017

India and Russia have begun discussions to work out modalities for conducting their **first tri-service military exercise INDRA 2017 in October 2017 in Russia.** It will be **India's first bilateral military exercise** with any country **involving all three services.**

What

1. The **2017 Indra exercise** will primarily focus on achieving coordination between forces of two countries in tri- services integrated theatre command scenario.
2. The aim of exercise is to carry out joint exercises for suppression of international terrorist activities under United Nations mandate.
3. Indian Army will send about 350 soldiers from infantry, artillery and armoured streams. Indian Navy is fielding two ships, stealth frigate, **INS Satpura, and anti-submarine warfare (ASW) corvette, INS Kadmatt**, along with two on-board helicopters. Indian Air Force (IAF) is likely to share fighter jets of host.
4. The headquarters of Integrated Defence Staff under Defence Ministry is leading exercises from Indian side.
5. India's efforts for tri-service integration will provide opportunity to synergise jointness between its services and see how other countries function jointly.

India's first advanced Homoeopathy Virology lab

India's first state of art virology laboratory was inaugurated at Dr. Anjali Chatterjee Regional Research Institute for Homoeopathy in **Kolkata, West Bengal**. The lab will play important in developing new drugs and technologies in Homoeopathy to combat emerging challenges of viral diseases.

What

1. **The laboratory is only one of its kind in India** for conducting basic and fundamental research in Homoeopathy for viral diseases like **influenza, dengue, chickunguniya, Japanese encephalitis and swine flu (H1N1)**.
2. It will develop new drugs and technologies to combat emerging challenges of viral diseases. The laboratory is recognized by Calcutta University to undertake research work of PhD students in field of homoeopathy.

Two new contraceptives launched

The Ministry of Health and Family Welfare has launched **two new contraceptives, an injectable contraceptive MPA under the 'Antara' programme** and a contraceptive pill, **'Chhaya'**, in the public health system to expand the basket of contraceptive choices to meet the emerging needs of couples. The contraceptives, which are available for free in Medical Colleges and District Hospitals at present, have **so far been launched in 10 states** that includes Maharashtra, Uttar Pradesh, Madhya Pradesh, Rajasthan, Karnataka, Haryana, West Bengal, Odisha, Delhi and Goa.

What

1. The contraceptives are safe and highly effective, the **'Antara' injectable being effective for three months** and the **'Chhaya' pill for one week**, and will help meet the changing needs of couples and help women plan and space their pregnancies. Training of healthcare practitioners from all the states has been completed as well, with a pool of state and district level doctors and staff nurses being trained to support the roll-out.
2. To help improve the supply and distribution of contraceptives, the Ministry had recently 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.
3. In addition, **Mission Parivar Vikas**, a central family planning initiative has also been launched by the Ministry. The key strategic focus of this initiative is on improving access to contraceptives through delivering assured services, ensuring commodity security and accelerating access to high quality family planning services.
4. The mission is being **implemented in 146 high focus districts** with the highest total fertility rates in the country. These districts are in the **seven high focus, high Total Fertility Rates (TFR) states** of Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Jharkhand, Chhattisgarh and Assam, which constitute 44% of the country's population.
5. The main objective of the Mission Parivar Vikas family planning initiative is **to bring down the Total Fertility Rate to 2.1 by the year 2025**.

6. The Ministry of Health and Family Welfare, through its sustained family planning efforts, aims to achieve its goal of increasing modern contraceptive usage and ensure that 74% of the demand for modern contraceptives is satisfied by 2020, with continued emphasis on delivering assured services, generating demand and bridging supply gaps.
7. The Ministry's focus remains on increasing awareness and demand through a holistic communications campaign that has simultaneously been rolled out across all states of India.

SLINEX 2017

The seventh edition of India-Sri Lanka joint maritime naval exercise **SLINEX 2017** was held near **Vishakhapatnam (Andhra Pradesh) in Bay of Bengal**. It will be conducted from 7th to 14th September 2017. The seven days exercise aimed to reinforce strong neighbourly ties between both countries underscored by extensive maritime interaction and improved understanding.

What

1. **SLINEX 2017** focused on fleet work, seamanship, communication, replenishment at sea as well as helicopter operations.
2. Sri Lanka Navy's offshore patrol vessels, SLNS Sayura and Sagara had participated in this edition of biennial exercise.
3. The **exercise was held in both Harbour Phase and Sea Phase**.
4. In harbour phase, both participant navies engaged in professional, cultural and social interactions.
5. In Sea Phase, both navies jointly conducted complex operations including anti-piracy exercises, cross-deck helicopter operations, gun firings and anti-surface exercises.

Flashpoint

1. **SLINEX series of biennial bilateral maritime exercises between India and Sri Lanka, initiated in 2005.**
2. Its mandate is to enable navies of both countries to rehearse and improve their own capabilities and enhance operational effectiveness required to maintain maritime security in region.

Exercise Yudh Abhyas 2017

As part of the ongoing **Indo-US defence cooperation**, a **joint military training, Exercise Yudh Abhyas - 2017** is being conducted at Joint Base Lewis McChord, Washington, USA from 14 to 27 September 17. **Exercise Yudh Abhyas is one of the largest joint running military training** and defence corporation endeavors between India and USA. This will be the **13th edition of the joint exercise** hosted alternately between the two countries.

What

1. **Exercise Yudh Abhyas** will provide an opportunity to the armed forces of both countries to train in an integrated manner at Battalion level with joint planning at Brigade level.
2. Multiple scenarios will be rehearsed during the joint exercise with a view to understand each-other's organisational structure and battle procedures which would result in a **higher degree of jointmanship** that would further facilitate **interoperability between the armed forces of both countries** to meet any unforeseen contingency across the globe.
3. The exercise is also an ideal platform to learn from each-other's experiences of planning and execution of operations.
4. **Both armies will jointly train, plan and execute a series of well-developed operations for neutralisation** of threats of varied nature.
5. In the end a joint exercise will be undertaken by both countries in an operational setting under a UN mandate.
6. Experts from both sides will also hold expert academic and military discussions to share each other's experiences on varied topics for mutual benefit.

Odisha top in FRA

Odisha has managed to retain the **top spot in implementation of the Forest Rights Act (FRA), 2006**, for the third consecutive year. The state has also been successful in **covering the FRA with other poverty alleviation schemes**, as per the outcome of a review taken by Prime Minister Narendra Modi through video conferencing from Delhi.

What

1. Odisha topped the list at the national level both in terms of the number of **land title rights distributed**, and the percentage of titles distributed over the number of claims raised.
2. As of June, about 4,06,745 individual family titles and 5,942 community rights covering nearly 6,09,553 acres and 3,27,171 acres, respectively, have been distributed till June under the FRA.

Surya Kiran 2017 begins

India and Nepal began their joint military exercise in the western part of the Himalayan country, focusing on counter-terrorism and forest fighting operations. The exercise - Surya Kiran - was being participated by around 300 troops each side in **Rupandehi district**. Senior Nepal Army officer Rajendra Karki inaugurated the exercise, according to a statement by the army.

What

1. The **12th edition of Nepal-India joint military exercise** will conclude on September 16.
2. According to the Indian Army officials, **the Surya Kiran is the largest joint exercise in terms of troop participation**.
3. The battalion-level joint training between the two armies will focus on counter-terror operations in mountainous terrain by facilitating interoperability.
4. Disaster management and joint operations for disaster relief will also be a part of the exercise.
5. **The 11th edition of the joint exercise was held in Pithoragarh in Uttarakhand**.
6. The Nepal Army said the joint exercise will provide the two armies a platform to exchange experiences, ideas and skills.
7. The joint military exercises will further strengthen friendly relations existing between the two countries for centuries and will promote mutual understanding between the two armies.
8. **Surya Kiran series of exercises are held alternately in India and Nepal**.

Nag missile

India's indigenously developed **third generation anti-tank guided missile (ATGM) Nag** has been successfully flight tested by premier defence research organisation DRDO in **deserts of Rajasthan**, marking completion of development trials.

What

1. The defence ministry said Nag has been successfully flight tested twice by the DRDO against two different targets in Rajasthan. The missile can hit a **target up to seven km**.
2. The ATGM Nag missile has successfully hit both the targets under different ranges and conditions with very high accuracy as desired by the armed forces.
3. India has been trying to ramp up its military capability in sync changing security dynamics in the region.
4. With these two successful flight trials, and the flight test conducted earlier in June in the peak of summer, the complete functionality of **Nag ATGM along with launcher system NAMICA** has been established and marked the successful completion of development trials of Nag missile.

Coastal shipping and waterways summit

Kochi will host the fifth edition of Coastal Shipping and Inland Water Transportation Business Summit 2017 on September 22 at Hotel Crown Plaza. The summit will be an initiative to explore the **immense potential of coastal shipping and waterways** as well as an effort to build a shared commitment and decipher the role that

each stakeholder will have to play in integrating the coastal and waterways transport infrastructure.

What

1. Kerala Governor P Sathasivam will present the India Sea trade Award for Excellence in Coastal Shipping & Inland Water Transportation.
2. Nutan Guha Biswas, Chairperson of Inland Waterways Authority of India, Alok Srivastava, Special Secretary to Ministry of Shipping, Madhu S Nair, Chairman and Managing Director, Cochin Shipyard and Ravi M Parmar, Chairman Kandla Port Trust will participate in the function.
3. Former Shipping Secretary **K Mohandas who is the chairman of the summit** said that a shift from land based transportation of cargo to water based movement can happen only with deliberate, well-coordinated efforts from the governments, the infrastructure providers, the trade, the cargo owners and the shipping industry. Together, they have to find the pragmatic path forward and this conference is expected to facilitate that.
4. The seminar will create a platform to discuss various topics like **Indian Coastal Shipping & Inland Water Transport: Policies, Current Updates & Vision, IWAI's perspective to propelling India's trade and economic growth**, with particular focus on Kerala, understanding the cargo owners perspective to align, engage and forge a commitment towards an instant modal shift and reviving coastal shipping; call to move and handle domestic cargo on the coast waters and river-borne trade.
5. The event will also honor institutions and individuals who have made a difference with their outstanding contribution to the maritime sector.

Phase out polluting chemicals

India has begun the process of eliminating **seven extremely harmful chemicals** almost **eight years after the world agreed on their phase out under the Stockholm Convention**. The Union Ministry of Environment and Forest came out with a draft proposal to remove these **seven chemicals from the industry**. It would be done in the same manner as followed earlier to wipe off another **12 persistent organic pollutants**.

What

1. **Four out of the seven chemicals** are **brominated flame retardants used mainly in the electrical and electronic industry**; two are found in the insecticide industry and the remaining one is an industrial solvent.
2. They are among the persistent organic pollutants that can stay the environment for years with damaging consequences.
3. Removal of the POPs from the environment is an international exercise under the **Stockholm Convention that began in 2004** with 12 chemicals, popularly known as the "dirty dozens. **India ratified the convention in 2006 and banned these chemicals with some exceptions**.
4. With the addition of more chemicals in the last 13 years the list of POPs has now expanded to include 27 pollutants.
5. Almost 10 days ago, the environment ministry issued a draft proposal to get rid of seven of these additional POPs, whose phase out was decided in 2009.

The chemicals on the elimination list are:

1. Chlordecone
2. Hexabromobiphenyl
3. Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octa-BDE)
4. Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial penta-BDE)
5. Pentachlorobenzene
6. Hexabromocyclododecane
7. Hexachlorobutadine.

Operation Insaaniyat

A **humanitarian crisis arose in Bangladesh** due to heavy influx of refugees from neighbouring Myanmar. **The government of India has decided to assist Bangladesh in this crisis** by sending relief material. The Indian Air Force was tasked to airlift the relief material from India to Bangladesh. **One C-17 Globemaster strategic heavy lift cargo**

aircraft was positioned at short notice at Delhi on 13 Sep 17 to airlift 55 Tons of relief material to Chittagong, Bangladesh.

What

1. This aircraft was loaded overnight with **relief material consisting of critical daily necessities** viz., rice, pulses, sugar, salt, cooking oil, ready to eat meals, mosquito nets etc.
2. The C-17 carrying relief material departed early morning on 14 Sep 17 and routed via Kolkata to pick up additional load.
3. The material was delivered at Chittagong, Bangladesh at 1245 hours on 14 Sep 17.
4. One more C-17 is scheduled to airlift additional relief material to Bangladesh.
5. The Indian Air Force rose to the challenge and played a pivotal role to further strengthen the close ties of friendship between India and Bangladesh.

‘SWACHHTA’ Ranking - 2017

An award ceremony based on **‘SWACHHTA’ Ranking 2017 of Higher Educational Institutions was held in New Delhi**. Union Human Resource Development Minister, Shri Prakash Javadekar gave away the prizes to the awardees. Shri Prakash Javadekar congratulated the awardees of ‘SWACHHTA’ Ranking- 2017 of Higher Educational Institutions. Speaking on the occasion, the Minister said that the **Swachh Bharat Abhiyan is the most significant cleanliness campaign by the Government of India**. Under this mission more than four crore and eighty lakhs toilets were constructed in India since 2nd October, 2014 and **more than two lakhs villages are now open defecation free**.

What

1. The Minister said the students are **cleanliness ambassadors and along with the support of people and institutions they will lead the vision of Clean India** of our Prime Minister Shri Narendra Modi.
2. He also said to make Higher Educational Institutions a smart campus, we should focus on cleanliness as well as waste management. Save water, save electricity, promote cleanliness and manage waste to become smart campus. Shri Javadekar praised the efforts made by the various departments of Ministry of HRD for organising such ranking system which is in line with Swachh Bharat Mission and contributing toward a cleaner India. He said, we should participate in these programmes to inform others too.
3. An exercise to rank **Higher Educational Institutions (HEIs) on the basis of cleanliness and hygiene has been undertaken and concluded**.
4. Parameters for a clean campus were formulated, like student/toilet ratio, kitchen hygiene, availability of running water, modernity of toilet & kitchen equipment, campus green cover, garbage disposal in hostels and academic buildings, disposal techniques, water supply systems and also a certain weightage to whether the institutions has adopted any neighbouring locality or village to spread awareness & activities in Swachhta.
5. About **3500 HEIs responded to the online invitation, submitting all their details as per format**. The top 174 institutions were shortlisted as per criteria and officials from UGC and AICTE inspected the premises of all 174 institutions.
6. **Finally, the top 25 institutions across various categories like Universities, Technical Institutions, Colleges and Government institutions were selected** and they were awarded on the occasion. This exercise will help generate peer pressure amongst institutions in the all important area of cleanliness.
7. Clusters of villages have been adopted by certain **HEIs under the Unnat Bharat Abhiyan programme** in consultation with District Collectors. All Collectors and HEIs under the programme were invited to participate in the Best Collector & HEI Award by converting, before 31st August 2017, One Village into Open Defecation Free, with solid and liquid waste facility.
8. Many participated in the exercise and finally, 5 districts completed the exercise – Medak, Jhabua, Warangal, Ajmer and Indore. The Collectors made

presentations in MHRD on 5th September 2017 on their achievement. Those 5 Collectors along with the HEIs assisting them were awarded on the occasion.

List of Institutions awarded on Swachhata Rankings

Institution	Place	State
University		
1.	O. P. Jindal Global University, Sonipat	Sonipat Haryana
2.	MANIPAL UNIVERSITY, JAIPUR	Jaipur Rajasthan
3.	Chitkara University, Kalu Jhanda (Barotiwala), Solan	Solan HP
4.	K.L.E. Academy of Higher Education and Research, Belgaum	Belgaum Karnataka
5.	Dayalbagh Educational Institute, Agra	Agra UP
Colleges		
1.	Kongu Arts and Science College	Erode TN
2.	Vidya Pratishthans Arts, Commerce & Science College, M.I.D.C.Baramati, Pune 413100	Pune Maharashtra
3.	RAMAKRISHNA MISSION VIVEKANANDA COLLEGE	Chennai TN
4.	Vivekanandha College of Arts & Science (W)	Tiruchengode TN
5.	S N R Sons College	Coimbatore TN
6.	K.G. College of Arts and Science	Coimbatore TN
Technical institutions		
1.	Amrita Vishwa Vidyapeetham, Coimbatore	Coimbatore TN
2.	Koneru Lakshmaiah Education Foundation, Guntur	Guntur AP
3.	Sri Ramachandra Medical College and Research Institute, Chennai	Chennai TN
4.	Vivekanandha College of Engineering for Women	Tiruchengode TN
5.	R.M.D Engineering College	Chennai TN
6.	R.M.K Engineering College	Chennai TN
7.	ABES INSTITUTE OF TECHNOLOGY, GHAZIABAD	Ghaziabad UP
Government institutions		
1.	G.B. Pant University of Agriculture and Technology,	Pantnagar UK
2.	Madurai Kamraj University,	Madurai TN
3.	Alagappa University, Alagappa Nagar,	Karaikudi TN
4.	National Institute of Technology,	Hamirpur HP
5.	Indian Institute of Technology,	Guwahati Assam
6.	Govt Post-graduate College for Girls, Sector-11	Chandigarh UT
7.	Punjab University	Chandigarh Punjab

INTERNATIONAL

Global drone registry

The United Nations' aviation agency is backing the creation of a **single global drone registry, as part of broader efforts to come up with common rules for flying and tracking unmanned aircraft.** While the **International Civil Aviation Organization** cannot impose regulations on countries, ICAO has proposed formation of the registry during a **Montreal symposium** this month to make data accessible in real time.

What

1. The **single registry would eschew multiple databases** in favor of a one-stop-shop that would allow law enforcement to remotely identify and track unmanned aircraft, along with their operator and owner.
2. The initiative comes at a time when drone usage is soaring in the United States, Europe and China, raising privacy concerns and fears of collisions with commercial jets.
3. The proposal, however, could face push back from users, after hobbyists successfully challenged the creation of a US drone registry by the Federal Aviation Administration in court earlier this year.
4. **ICAO will host the symposium from Sept 22-23 on issues like registering and tracking drones**, along with geofencing-like systems to prevent their operation in restricted areas.
5. The talks will be at an event **attended by experts and companies like Google, Rockwell Collins and Amazon.com**.
6. Montreal-headquartered ICAO, which normally sets standards for **international civil aviation that are adopted by its 191-member countries**, was asked to assist in the development of more uniform domestic drone regulations because the remotely-piloted aircraft are sold and flown globally.

9th BRICS summit

The 9th BRICS summit was held in Xiamen, China. The theme of the summit was “**Stronger Partnership for brighter Future**”. It was for second time the summit was hosted in China after 2011 summit. At the end of the summit all BRICS leaders adopted Xiamen declaration and four documents were signed in presence of BRICS Leaders. Which are?

1. Strategic Framework of BRICS Customs Cooperation
2. BRICS Action Plan for Innovation Cooperation(2017-2020)
3. BRICS Action Agenda on Economic and Trade Cooperation
4. MoU between BRICS Business Council and New Development Bank on Strategic Cooperation

Xiamen declaration

1. **Strive towards broad partnerships:** BRICS countries agreed to strive towards broad partnerships with emerging markets and developing countries and pursue equal-footed and flexible practices and initiatives for dialogue and cooperation with non-BRICS countries, including through **BRICS Plus cooperation** (It includes Thailand, Tajikistan, Egypt, Kenya and Mexico).
2. **BRICS local currency bond markets:** Member countries resolved to promote development of BRICS **local currency bond markets and agreed to jointly establish a BRICS local currency bond** fund and facilitate financial market integration.
3. **R&D and innovation in ITC:** They agreed to enhance joint research, development and innovation in information and communications technology (ICT), including internet of things (IoT), **big data analytics, cloud computing, nanotechnology, artificial intelligence, 5G and their innovative applications.**

Flashback

1. BRICS is acronym for an association of **five major emerging national economies viz**, Brazil, Russia, India, China and South Africa. **It was established in 2009.**
2. Originally it was known as BRIC before inclusion of South Africa in 2011. The first formal summit was held in Yekaterinburg, Russia in 2009.
3. They are home to 42% of the world's population. Their total share in the global economy has risen from 12% to 23% in the past decade and collectively contributes them more than half of global growth.

4. **Cooperation on energy:** They agreed to strengthen BRICS cooperation on energy and work to foster open, flexible and transparent markets for energy commodities and technologies.
5. **Promote effective use of fossil fuels:** They also agreed to work together to promote most effective use of fossil fuels and wider use of gas, hydro and nuclear power to move towards low emission economy, better energy access and sustainable development.
6. **BRICS Agriculture Research Platform:** It is proposed to be established in India which will serve as virtual network facilitating cooperation in priority areas.
7. **Broad counterterrorism coalition:** They called upon international community to establish genuinely broad counterterrorism coalition and support UN's central coordinating role in this regard.
8. **People-to-People exchanges:** It should be promoted for development and enhancing mutual understanding, friendship and cooperation among BRICS countries.

New ASEAN Cyber Drill

The **ASEAN Computer Emergency Response Team Incident Drill (ACID)** was held in Hanoi, Danang, and Ho Chi Minh City in Vietnam. This year **it was 12th year of drills** as part of subregion's response to growing cyber challenges witnessed in recent years.

ACID's objective is to test and enhance incident response as well as broader cooperation and coordination among ASEAN CERTS as well as some of their key dialogue partners. It involves ten members of ASEAN as well as **five dialogue partners – Australia, China, India, Japan, and South Korea.**

What

1. The purpose of drill was **to manage challenges in cyber realm** focused on areas like incident response, confidence-building, and cyber capacity-building.
2. These realms ranged from cybersecurity working group within ASEAN Defense Ministers' Meeting Plus to new ASEAN Cyber Capacity Program **introduced in 2016 by Singapore.**
3. It also focused on reinforcing coordination among actors as well as boosting skills in areas such as investigating incidents and analyzing malicious codes.
4. In 2016, ACID had focused on several areas including Ransomware and cyber forensics, in line with ongoing efforts to ensure that CERTS are up to date with current challenges in cyber realm.

Flashback

1. **ASEAN is a regional organisation** that aims to promote intergovernmental cooperation and economic integration amongst its members.
2. **It consists of 10-member countries-** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.
3. It came into existence on August 8, 1967, after ASEAN declaration (also known as Bangkok Declaration).

Working groups to promote exports

India and China have agreed to set up industry specific working groups for increasing exports with a view to bridge trade deficit with Beijing, Commerce Minister Suresh Prabhu said on 9 September 2017. Concerned about growing trade deficit with China, we agreed to set up industry specific working groups, **to promote more exports from India.**

What

1. Commerce Minister Suresh Prabhu is in Manila, the Philippines to attend the **fifth East Asia Summit (EAS) Economic Ministers' Meeting.**
2. The minister would also participate in the trade ministers' meeting of **16 RCEP member countries.**

3. **Regional Comprehensive Economic Partnership (RCEP)** is a mega trade pact among 16 countries which aims to cover goods, services, investments, economic and technical cooperation, competition and intellectual property rights.
4. At the sidelines of EAS meet, the minister met his Chinese counterpart Zhong Shan to discuss ways to promote bilateral trade between the countries.
5. India's trade deficit with China narrowed marginally to \$51.08 billion in 2016-17 from \$52.69 billion in 2015-16.
6. India wants greater market access in China for its goods and services like **IT and pharma products**. The country has also insisted upon China to increase investments.

MoU between India and Morocco

The Union Cabinet chaired by the Prime Minister has given its **approval for signing of a Memorandum of Understanding (MoU) between India and Morocco** on cooperation in the **field of health**.

The MoU covers the following areas of cooperation:-

1. Non-communicable diseases, including child cardiovascular diseases and cancer;
2. Drug Regulation and Pharmaceutical quality control;
3. Communicable Diseases;
4. Maternal, child and neonatal health;
5. Hospital twinning for exchange of good practices;
6. Training in administration and management of health services and Hospitals;
7. Any other area of cooperation as may be mutually decided upon.
8. A Working Group will be set up to further elaborate the details of cooperation and to oversee the implementation of this MoU.

India signs 11 agreements with Myanmar

India and Myanmar on 6 September 2017 signed 11 agreements in a range of sectors, **including one on maritime security cooperation**, to further strengthen their multifaceted partnership. The MoUs were signed after Prime Minister Narendra Modi held wide-ranging talks with Myanmar's State Counsellor Aung San Suu Kyi.

What

1. India and Myanmar signed an MoU to **strengthen maritime security cooperation**.
2. The **two sides also signed an agreement for sharing white shipping information** to improve data sharing on non-classified merchant navy ships or cargo ships.
3. The 11 MoUs also include **one between the Election Commission and Union Election of Myanmar**, the national level electoral commission of Myanmar.
4. An MoU was also signed to **organise cultural exchange programme for the period 2017-2020**, according to a statement issued by Ministry of External Affairs.
5. The two countries also signed **agreements on cooperation between Myanmar Press Council and Press Council of India**, extension of agreement on the establishment of India-Myanmar Centre for Enhancement of IT skill.
6. They also signed agreements to **cooperate in 'Medical Products Regulation'** and in the field of health and medicine.
7. They also signed an MoU on **enhancing the cooperation on upgradation of the women's police training centre** at Yamethin in Myanmar.
8. Modi arrived here on the second leg of his two-nation trip during which he travelled to southeastern Chinese city Xiamen where he attended the annual BRICS summit and held talks with Chinese President Xi Jinping, Russian President Vladimir Putin and other world leaders.
9. **This is Modi's first bilateral visit to Myanmar**. He had visited the country in 2014 to attend the ASEAN-India Summit.

10. **Myanmar is one of India's strategic neighbours** and shares a 1,640-km-long border with a number of northeastern states including militancy-hit Nagaland and Manipur.

India, Japan ink 15 MoUs

India and Japan on 14 September 2017 signed 15 memorandums of understanding (MoUs), which dealt with wide-ranging issues such as bilateral relations, defence and security cooperation, and supporting each other for a permanent seat in the United Nations' expanded Security Council.

Some Agreements

1. MoU on International Academic and Sports Exchange
2. MoC in field of Japanese Language Education in India
3. Exchange of RoD on Civil Aviation Cooperation (Open Sky)
4. MOC between Ministry of Home Affairs and Cabinet Office of Japan
5. India-Japan Investment Promotion Road map between DIPP and METI
6. MoU between DBT and National Institute of Advanced Science & Technology (AIST)
7. Arrangement between India Post and Japan Post for the Implementation of Cool EMS service.
8. MoU between RIS and IDE-JETRO for promotion of Cooperation in Research Related Activities.
9. **MOC between METI and Gujarat on 'Japan-India special programme for Make In India'** in Mandal Bechraj-Khoraj in Gujarat
10. **India-Japan Act East Forum:** To enhance connectivity and promote developmental projects in North East India in efficient and effective manner.
11. Joint Research Contract India's Department of Biotechnology (DBT) and between National Institutes of Advanced Industrial Science & Technology (AIST), Japan.
12. Agreement for International joint exchange programme between interdisciplinary theoretical and mathematical sciences programme, RIKEN and National Centres for Biological Sciences.

Foundation stone for bullet train

India's first high-speed rail project (bullet train) project was jointly laid by Prime Minister Narendra Modi and his Japanese counterpart Shinzo Abe at **Sabarmati Station ground in Ahmedabad**. The 508km-long Mumbai to **Ahmedabad High Speed Rail (MAHSR) Project** will be built at cost of Rs 1.10 lakh crore. It is expected to be completed by 2022 (It was recently advanced by year from earlier deadline of 2023).

What

1. MAHSR project is joint venture between Indian Railways and **Japan's Shinkansen Technology**.
2. **The train will cover distance of over 508 km from Sabarmati (Gujarat) to Bandra (Mumbai, Maharashtra)** in around 2.58 hours at high speed of 320 kph from the existing 7-8 hours. In case of rapid high-speed, it will cover the distance in 2.07 hours.
3. On the Ahmedabad-Mumbai route, 12 stations have been proposed: Mumbai, Thane, Virar, Boisar, Vapi, Bilimora, Surat, Bharuch, Vadodara, Anand, Ahmedabad and Sabarmati.

India's second bullet train project

1. The Indian Railways will launch country's **second high-speed train project between Delhi and Amritsar (Punjab) via Chandigarh**.
2. The project **will be completed by 2024**. Train on this route will run on standard broad gauge and cover 458-km-long route in 2 hours and 30 minutes running at a speed of 300-350 kmph, reducing travel time by about two and half hours between both destinations.
3. Proposed stops on this route are Ambala, Chandigarh, Ludhiana, Jalandhar.

- Total project cost of Rs.1,10,000-crore, 80% cost of Rs 88,000 crore will be provided by **Japan International Cooperation Agency (JICA)** as soft loan at interest of 0.1% per annum. **This loan will be repaid to Japan in 50 years**, with 15 years grace period.

ECONOMY

Task force for employment

In a bid to provide a “**major**” thrust to job creation by enhancing India’s exports, the **NITI Aayog** has set up a **task force to be headed by its Vice-Chairman Rajiv Kumar**. The task force, which includes government and private sector representatives, will submit its report by November.

The objectives

- The task force will propose a **comprehensive plan of action to generate employment and alleviate under-employment in both goods and services sectors** and low wages by boosting India’s exports in key labour-intensive industries, as per its terms of reference.
- Its other terms of reference include suggesting ways to enhance the availability of data on trade such that it is “reliable, globally comparable and timely, particularly with respect to trade in services”.
- Recommending **sector-specific policy interventions in key employment sectors, measures to enhance trade in services** with high employment potential, identifying key macroeconomic factors constraining exports and suggesting methods to address these constraints, assessing the effectiveness of existing schemes to promote exports and issues related to logistics, export credits and trade facilitation are its other terms of reference.

GoM panel on exports

Finance Minister Arun Jaitley constituted a **Group of Ministers (GoM) to monitor and resolve the IT challenges faced in the implementation of Goods and Services Tax (GST)**. He also set up a committee on exports to look at **the issues of export sector and to recommend to the GST Council** a suitable strategy for helping the export sector in the post-GST scenario.

What

- This move follows **the decisions taken to this effect in the 21st meeting of the GST council in Hyderabad** on September 9.
- Sushil Kumar Modi, Deputy Chief Minister of Bihar, will be the convenor of GoM, Revenue Secretary Hasmukh Adhia will be the convenor for the committee on exports.
- The other members of the GoM are Amar Agarwal, Minister for Commercial Taxes, Government of Chhatisgarh; Krishna Byregowda, Minister for Agriculture, Government of Karnataka; T.M. Thomas Isaac, Finance Minister, Government of Kerala and Etela Rajendar, Finance Minister, Government of Telengana.
- The **GoM will be assisted in its work by the Chairman, Goods and Services Tax Network (GSTN)** and the Chief Executive Officer, GSTN.

IT ministry asks banks to upgrade UPI

The union information technology ministry has asked all banks **to issue upgraded versions of their Unified Payments Interface (UPI) apps** which will support payments using **BharatQR code** too. The move is aimed at creating a **single QR code by integrating UPI QR with BharatQR**.

What

- Bharat QR is a common quick response (QR) code** released by major card payment companies—**National Payments Corp. of India (NPCI) that runs RuPay cards**, MasterCard and Visa—under instructions from the **Reserve Bank of India (RBI) on 20 February**.

2. UPI app for State Bank of India (SBI) has been renamed as BHIM SBI Pay from SBI Pay. Similarly, other bank apps have too been renamed.
3. The government is planning to develop a **common merchant app for BHIM which will support Bharat QR code for all categories of merchants.**
4. The aim is to create a seamless network with a single app and a QR code for mobile transactions, said a person familiar with the development.
5. **The NPCI is working on integrating the Bharat QR code with Bharat Interface for Money (BHIM) app.**
6. **BHIM app was launched on 30 December** by Prime Minister Narendra Modi. It supports payments by scanning UPI QR codes (both static and dynamic). UPI was launched by NPCI and it facilitates instant fund transfer between two bank accounts on the mobile platform.
7. There are **five constituents of BharatQR—Mastercard, Visa, American Express, RuPay and now we have UPI.** Most of the banks have not yet changed their apps, only BHIM app has incorporated BharatQR.
8. So, now the government is asking every bank having a UPI app to undergo a change to introduce the ability to read BharatQR as a part of their UPI app.
9. Transactions using UPI rose to a record 16.61 million in August, a seven-fold increase since December, according to NPCI. UPI was launched in August 2016 with 21 banks, and is currently being offered by about 55 banks.
10. The push towards QR-based payments will revolutionize the retail payments landscape. **The QR code is going to reduce the cost of infrastructure for these retail merchants;** they may or may not use the point-of-sale (POS) machines for transactions. Customers on the other hand, will have more payment options at the terminal.

The government is planning to launch a promotional drive for BharatQR from 2 October and ensure that all the government departments and PSUs display the code to facilitate payment of various kinds of utility bills and tax payments,” said another person familiar with the development, requesting anonymity.

SCIENCE AND TECHNOLOGY

Policy group forms for AI

Amid a raging global debate on the **consequences of artificial intelligence (AI)**, India has **formed a “policy group” to study the new technologies and recommend a framework for its adoption**, IT industry body Nasscom said. “Policy group” has been created by the **Ministry of Electronics and Information Technology** with representation from the academia, which has done a lot of research on the subject, and Nasscom for the industry’s perspective.

What

1. The group will focus on aspects such as **skilling the workforce, privacy, security and fixing responsibility if anything goes wrong.**
2. For creation a thought leadership on what is this programme all about, what is the likely impact. Create a thought leadership when AI becomes a reality, what are the elements and sub—elements which need to be taken care of, how do we take care of that.
3. Nasscom will be holding a stakeholders’ consultative meeting on what is required from a policy perspective by the end of the year for the same.
4. Meanwhile, there are over **800 multinationals such as Intel, Boeing, Bosch, Goldman Sachs, Morgan Stanley** that have set up their global in-house centres in the country and create \$20 billion of work every year, growing at 10 per cent which is faster than the services export.

New malware detected in India

A new malware **Xafecopy Trojan** has been detected in India which steals money through victims' mobile phones, cyber security firm Kaspersky said in a report. Around **40 per cent of target of the malware** has been detected in India. Kaspersky Lab experts have

uncovered a mobile malware targeting the **WAP billing payment method**, stealing money through victims' mobile accounts without their knowledge, the report said.

What

1. **Xafecopy Trojan** is disguised as useful apps like BatteryMaster, and operates normally. The **Trojan secretly loads malicious code onto the device**.
2. Once the app is activated, the Xafecopy malware clicks on web pages with **Wireless Application Protocol (WAP) billing** - a form of mobile payment that charges costs directly to the user's mobile phone bill. After this, the malware silently subscribes the phone to a number of services, the report said.
3. The process also does not require user to register a debit or credit card or set up a username and password.
4. The malware uses technology **to bypass 'captcha' systems** designed to protect users by confirming the action is being performed by a human. In the captcha system, websites show a set of some letter or numbers which are required to be manually filled by the user.
5. **Xafecopy hit more than 4,800 users in 47 countries within the space of a month**, with 37.5 per cent of the attacks detected and blocked by Kaspersky Lab products targeting India, followed by Russia, Turkey and Mexico.

Fast paper-based tuberculosis test

Scientists have developed a **fast, paper-based test to diagnose tuberculosis** that can be read with a **smartphone, a technology that is increasingly available in emerging economies**. **Diagnosing tuberculosis (TB)** early can allow patients to receive the medicine they need and also help prevent the disease from spreading. However, in resource-limited areas, equipment requirements and long wait times for results are obstacles to diagnosis and treatment. To tackle this problem, Chien-Fu Chen from National Taiwan University and colleagues come up with a more practical diagnostic test that can be read with a smartphone.

What

1. The researchers **combined gold nanoparticles with fluorescent single-stranded DNA sequences** that bind to the genetic material of **Mycobacterium tuberculosis**, the bacteria that cause TB.
2. These nanoparticles were then incorporated into a paper-based device. Adding even a minute amount of lab-derived, double-stranded DNA from M tuberculosis changed the colour of the test spots within an hour.
3. A smartphone camera was **used to analyse the colour change to determine the bacterial concentration**. The researchers also tested a tissue sample from an infected patient to further demonstrate that the device could be used in the field.
4. The World Health Organization (WHO) estimates that in 2015, 1.4 million people died from TB, with most of these deaths occurring in low- and middle-income countries, researchers said.
5. Early diagnosis could help curb these numbers. However, conventional methods such as sputum smear microscopy, chest X-rays and molecular-based tests require equipment, electricity and specialised personnel that are not always available in remote or developing areas.

Mystery signals detected

A mission to explore intelligent alien life in the universe has recorded **some mysterious signals** coming from a galaxy **three billion light years away**, according to an Indian-origin scientist working on the ambitious project co-founded by **Stephen Hawking, Vishal Gajjar** is part of the team working under the **Breakthrough Listen project** - set up by Hawking, one of the world's best-known scientists, and Russian billionaire Yuri Milner - to discover the truth about the universe.

What

1. The **latest fast radio bursts (FRBs)** prove their equipment is working well and ready to pick up signs of life if they exist.

2. If some form of life would like to produce a signal that is detectable to another civilisation this could be a way to do it, but I don't think they are coming from intelligent civilisations noted Gajjar.
3. **There are more theories than the number of sources.** We have opened more questions than answers.
4. **Breakthrough Listen is a USD 100-million global astronomical initiative launched in 2015** by **Hawking and Miller** and has teams around the world using their telescopes to look for evidence of life.
5. **The initial 10-year programme** will survey the 1,000,000 closest stars to Earth, scanning the entire galactic plane of the Milky Way.
6. Beyond our galaxy it will listen for messages from the 100 closest galaxies at 10 billion different frequencies.
7. At **first scientists thought the signals were the fallout from a catastrophic** event in space, like a supernova, but then they repeated again in 2015 and 2016 suggesting the whatever object produced them was still there.
8. In the fresh experiment, which will be elaborated upon in scientific journals in future, University of California, Berkeley, experts scanned the same galaxy at a higher frequency than which had been used to see the original bursts, and found 15 more.

Second-fastest-spinning pulsar discovered

Scientists have identified the **second-fastest known pulsar**, spinning at more than 42,000 revolutions per minute and **located between 3,200 and 5,700 light-years away**. A **pulsar is the core of a massive star** that exploded as a supernova. In this **stellar remnant, also called a neutron star**, the equivalent mass of half a million Earths is crushed into a magnetised, spinning ball no larger than Washington DC. The rotating magnetic field powers beams of **radio waves, visible light, X-rays and gamma rays**. If a beam happens to sweep **across Earth, astronomers observe regular pulses of emission** and classify the object as a pulsar. By following up on mysterious high-energy sources mapped out by **NASA's Fermi Gamma-ray Space Telescope**, the **Netherlands-based Low Frequency Array (LOFAR) radio telescope** detected the pulsar.

What

1. The object, **named PSR J0952-0607 - or J0952 for short** - is classified as a millisecond pulsar and is located between 3,200 and 5,700 light-years away in the constellation Sextans.
2. The **pulsar contains about 1.4 times the Sun's mass** and is **orbited every 6.4 hours** by a companion star that has been whittled away to less than 20 times the mass of the planet Jupiter.
3. At some point in this system's history, matter began streaming from the companion and onto the pulsar, gradually raising its spin to 707 rotations a second, or more than 42,000 rpm, and greatly increasing its emissions. Eventually, **the pulsar began evaporating its companion**, and this process continues today.
4. Due to their similarity to spiders that consume their mates, systems like J0952 are called black widow or redback pulsars, depending on how much of the companion star remains.
5. Most of the known systems of these types were found by following up Fermi unassociated sources.
6. LOFAR picked up pulses from **J0952 at radio frequencies around 135 MHz**, which is about 45 per cent lower than the lowest frequencies of conventional radio searches.
7. The **pulsars could rotate as fast as 72,000 rpm** before breaking apart, yet the fastest spin known - by PSR J1748-2446ad, reaching nearly 43,000 rpm - is just 60 per cent of the theoretical maximum.

Artificial colourful clouds

NASA has finally launched a sounding rocket that created artificial colourful clouds that were visible from New York to North Carolina. **The NASA Terrier-Improved**

Malemute sounding rocket was successfully launched from the **agency's Wallops Flight Facility in Virginia**.

What

1. During the **eight-minute flight**, **10 canisters about the size of a soft drink** can were ejected in space, about nine to 19 km away from the main payload.
2. The canisters deployed **blue-green and red vapour that formed artificial clouds**.
3. During an **ionosphere or aurora science mission**, these clouds, or vapour tracers, allow scientists on the ground to visually track particle motions in space.
4. The development of the **multi-canister ampoule ejection system** would allow scientists to gather information over a much larger area than previously possible when deploying the tracers just from the main payload.
5. The rocket, after being delayed multiple times **over the last 30 days**, **flew to an altitude of about 190 km**.

Pluto Mountains

Two mountain ranges on Pluto have been named after **Tenzing Norgay** and **Edmund Hillary** respectively by the **International Astronomical Union**, which for the first time, has officially approved the **naming of 14 features on the icy dwarf planet**. These are the first geological features on the planet to be named following the close flyby by the **New Horizons spacecraft in July 2015**.

What

1. The names pay homage to the underworld mythology, pioneering space missions, historic pioneers who crossed new horizons in exploration, and scientists and engineers associated with **Pluto and the Kuiper Belt**.
2. This is the first set of official names of surface features on Pluto to be approved by the **Working Group for Planetary System Nomenclature of the International Astronomical Union (IAU)**, the internationally recognised authority for naming celestial bodies and their surface features.
3. NASA's New Horizons team proposed the names to the IAU following the first reconnaissance of Pluto and its moons by the New Horizons spacecraft.
4. Tenzing Montes and Hillary Montes are mountain ranges honouring Tenzing Norgay (1914-1986) and Sir Edmund Hillary (1919-2008), **the Indian/Nepali Sherpa and New Zealand mountaineer** who were the first to reach the summit of Mount Everest and return safely.
5. The approved **Pluto surface feature names include the Burney crater that honours Venetia Burney (1918-2009)**, who as an 11-year-old schoolgirl suggested the name "Pluto" for Clyde Tombaugh's newly discovered planet.
6. **Sputnik Planitia is a large plain named after Sputnik 1**, the first space satellite, launched by the Soviet Union in 1957.
7. Djanggawul Fossae defines a network of long, narrow depressions named for the Djanggawuls, three ancestral beings in indigenous Australian mythology who travelled between the island of the dead and Australia, creating the landscape and filling it with vegetation.
8. **Sleipnir Fossa is named for the powerful, eight-legged horse of Norse mythology** that carried the god Odin into the underworld.
9. Virgil Fossae honours Virgil, one of the greatest Roman poets and Dante's fictional guide through hell and purgatory in the Divine Comedy. Hayabusa Terra is a large land mass named in honour of the Japanese spacecraft and mission (2003-2010) that returned the first asteroid sample.
10. **Voyager Terra honours the pair of NASA spacecraft, launched in 1977**, that performed the first "grand tour" of all four giant planets. Tartarus Dorsa is a ridge named for Tartarus, the deepest, darkest pit of the underworld in Greek mythology.

World's biggest X-ray goes into operation

Scientists in Germany say the **world's largest X-ray laser is now in operation** and will help them **capture images of structures and processes at an atomic level**. The **DESY research center** near Hamburg said the laser that went online flashes **27,000 pulses per second**, resulting in a luminance a billion times higher than the best conventional X-ray sources. **The array is a 3.4-kilometre long underground system**, similar to the **Large Hadron Collider** that found evidence of the **Higgs boson particle**, at Cern, Switzerland.

DESY says it will enable researchers **"to decipher the molecular composition of viruses and cells**, take three-dimensional images of the nanoworld, film chemical reactions and study processes occurring deep inside planets."

What

1. Scientists hope **the European XFEL project will open up new areas of research**.
2. This is expected to majorly benefit atomic models, where an advanced understanding of **biomolecular structures** and process will be studied.
3. The laser array will also be able to show processes that can analyse biomolecular reactions, the basis for drug synthesis and modification.
4. **Institutions from Germany, France, Italy, Poland, Russia, Spain, Sweden, Switzerland** and other countries are involved in the project. Scientists interested in applying for the project need to consider the 'beam time', the research period of 1-2 weeks that each project group shall be allocated.
5. Laser beams have been on in Hamburg since August 28, in anticipation of the launch.
6. Researchers are preparing their first experiments, which have been scheduled for mid-September.

MISCELLANEOUS

Expat Insider survey 2017

India is one of the least favourite places to live and work in for expats, according to InterNations' Expat Insider 2017 survey. Sitting at **rank 57 on the list of 65 nations**, India features in the **'bottom 10' of the list**, along with Turkey (56), Qatar (58), Ukraine (59), Italy (60), Saudi Arabia (61), Brazil (62), Nigeria (63), Kuwait (64), Greece (65). Compared to the 2016 survey; India slipped by eight positions in 2017. In the current survey, **Bahrain leaped from the nineteenth spot to the 1st due to "ease of settling in and career satisfaction"**. **Costa Rica (rank 2)**, Mexico (3), Taiwan (4), and Portugal (5) were also among the top destinations for expats. According to the survey, while high salaries, combined with cheap living costs, **can allow expats to lead a "life of luxury" in India**, they **"still struggle with pollution and culture shock"**.

What

1. **The Expat Insider survey is conducted each year by InterNations**, a network of 2.8 million expats based in Munich. It aims **to capture the views of millions of executives, skilled workers, students and retirees** who live outside the country where they grew up.
2. Further, according to respondents to the survey, it appears that **India is not a welcoming place for female expats**. The most popular reason, according to the survey, among female respondents (31 per cent) for moving to India is their partner's job or education. **"Sadly, life is not always straightforward for**

Quick snapshot

1. Poor performance in Family Life Index
2. Long working hours with 47.7 hour full-time working week
3. 9th place in Personal Finance Index
4. In bottom 5 for quality of life
5. Nearly 30% unhappy with personal safety
6. Culture shock makes it challenging to settle in life.

women in India: over half (52 per cent) say that there were instances where they felt unwelcome due to their gender.

3. **Expats face serious security problems when moving to India.** "Before moving to India, over one-third of respondents (36 per cent) believed that the move could have a negative impact on their personal safety. This did not change upon arrival, and nearly three in ten respondents (29 per cent) continue to be unhappy with this aspect.
4. Other problems include dealing with pollution, a '**poor work life**', and a '**disappointing family life**'.
5. InterNations survey, **expats are happy with India's low cost of living and the high salaries they command in the country.**

Saakshar Bharat Puraskaar 2017

The **National level function to celebrate 51st International Literacy Day** was organised by the Ministry of Human Resource Development, Government of India in New Delhi on 8 September 2017. Honorable Vice President of India, Shri M. Venkaiah Naidu was the Chief Guest on this occasion. The Vice President, Shri M. Venkaiah Naidu also presented the **Saakshar Bharat Awards – 2017 to the winners at state, district and panchayat level.**

SLMA (State)	1. State Literacy Mission Authority, Bhopal, MP.
Zilla Lok Shiksha Samitis (Districts)	1. Jashpur District of Chhattisgarh 2. Dantewada District of Chhattisgarh 3. Tikamgarh District of Madhya Pradesh
Gram Panchayat Lok Shiksha Samitis (GPLSSs)	1. Vellampalli Gram Panchayat, Parakala Block, Warangal Rural Dist., Telangana 2. Karmaha Gram Panchayat, Surguja, Chhattisgarh 3. Dumari Kalan Gram Panchayat, Majorganj Block, Sitamarhi Dist., Bihar 4. Temri Gram Panchayat, Dharsiva Block, Raipur Dist., Chhattisgarh 5. Gadamallaiah Guda Gram Panchayat, Yacharam Block, Ranga Reddy Dist., Telangana
Resource Support Organisations	1. State Resource Center, Indore, Madhya Pradesh 2. Jan Shikshan Sansthan, Mahbubnagar, Telangana

THE World University Rankings 2018

Poor performance in internationalisation of their campuses and a low research score have **pulled down Indian higher education institutes** such as the **Indian Institute of Science (IISc)** and some of the **Indian Institutes of Technology (IITs)** in the **Times Higher Education (THE) World University Rankings 2018**. While **IISc has dropped from the 201-250 band in the previous rankings to the 251-300 bands**, IIT-Delhi and IIT-Kanpur have fallen from the 401-500 band to the 501-600 band. IIT-Madras fell from the 401-500 band to the 601-800 cohort. The drop comes at a time when the IITs have sought more funds under the human resources development ministry's **Vishwajeet project** aimed at helping them climb in global academic rankings.

What

1. Times Higher Education on 5 September 2017 published the **14th annual edition of its World University Rankings**, a list of the **top 1,000 universities from 77 countries**. According to THE, India's performance has deteriorated, with its number of universities in the top 1,000 declining from 31 to 30.
2. The **University of Oxford retains first place in the World University Rankings**. The **University of Cambridge climbs two places to second**,

overtaking the California Institute of Technology and Stanford University, both joint third. While the **US continues to dominate the rankings**, Chinese universities are climbing rapidly.

- As leading universities in other Asian territories such as **China, Hong Kong and Singapore are consistently rising up the rankings**, in part thanks to high and sustained levels of funding, India's flagship Indian Institute of Science moves further away from the elite top 200.

World giving index for 2017

The **eighth edition of the Charities Aid Foundation (CAF) World Giving Index 2017** indicates that **global giving has declined across continents with only**

Africa recording a positive shift in giving habits. The report bases its findings on three parameters: **number of people donating money, volunteering time and helping a stranger.**

Asia, unlike Africa, has seen a decline in all three giving behaviours with helping a stranger **decreasing from 51% to 47%**, donating money **from 37% to 33%** and volunteering down to 21%.

Countries such as **Ireland,**

Germany, Norway and the UK have scores which have decreased between 1 to 5 percentage points and the US has slipped to the fifth position, its lowest ranking since 2011.

What

- Global decline can be attributed to political environments in individual countries.** For example, the report indicates even though **Myanmar has retained the top slot** for the fourth time, its percentage score is down by 5 points. This can be attributed to the political environment in the country which has changed in the last few years.
- India's ranking has improved to 81 from 91.** But there is still room for improvement, if India wants to beat its 2013 ranking of 69.
- The **CAF World Giving Index 2017 is primarily based on data from Gallup's World View World Poll**, which covered 139 countries that together represent around 95% of the world's population (around 5.2 billion people).
- According to the index, **80 countries saw a decrease in the proportion of people helping a stranger.** This reduction was seen both in developing and developed economies while a decrease in donation of money was more prominent in developed countries. In fact, the proportion of people across the world who reported donating money in 2016—when the research for this year's report was conducted—is the lowest in three years.
- Given the shifts in stability of many global economies it is not surprising that philanthropy is on a downswing globally. Philanthropy does get impacted when economies are not entirely stable.
- Like last year, **India continues to rule when it comes to the number of people participating**, but it lags behind when the proportion of the population participating is calculated. According to the data, 340 million Indians participated in helping a stranger (down from 401 million during 2015), 265 million gave money (up from 203 million during 2015) and 256 million volunteered (up from 200 million during 2015).
- In India, the **CSR (corporate social responsibility) norms** that resonate in every board room have made the development sector and related issues a priority agenda.

TOP TEN IN INDIA

RANK	2018	2017
1	IISc, Bengaluru (251-300)	IISc, Bengaluru (201-250)
2	IIT, Bombay (351-400)	IIT, Bombay (351-400)
3	IIT, Delhi (501-600)	IIT, Delhi (401-500)
4	IIT, Kanpur (501-600)	IIT, Kanpur (401-500)
5	IIT, Kharagpur (501-600)	IIT, Madras (401-500)
6	IIT, Roorkee (501-600)	IIT, Kharagpur (501-600)
7	AMU, Aligarh (601-800)	IIT, Roorkee (501-600)
8	BHU, Varanasi (601-800)	Jadavpur University, Kolkata (501-600)
9	University of Delhi (601-800)	AMU, Aligarh (601-800)
10	IIT, Guwahati (601-800)	BITS, Pilani (601-800)

- This has led to a rise in number of people exploring philanthropy, giving, and volunteering. This could be a contributing factor towards the Indian ranking moving up by 10 places.

Energy efficiency award

Hyderabad International Airport Ltd has bagged the **National Award for 'Excellence' in Energy Management 2017** at a conference hosted by the **Confederation of Indian Industry (CII)**.

What

- The event held **focused on recognising companies** that are engaged in energy efficiency initiatives and displaying **commitment towards energy conservation**.
- As a part of our Passenger is Prime initiative**, It deployed **eco-friendly vehicles** such as electricity powered buggys, ground handler vehicles, trolley movers, and have even commissioned e-cars.
- During the event, **airport developer GMR made a presentation highlighting the energy savings** of around 14.8 million units (MU) over the last three years and a drastic decline in **green house gases (GHG)** emissions after adopting various energy saving measures at the airport.

PETN not found in UP Assembly

Around two months after Chief Minister Yogi Adityanath announced in **UP Assembly that forensic test has confirmed that powder recovered from a seat in the opposition benches on July 12 was explosive material PETN (Pentaerythritol Tetranitrate)**, the state government suspended Dr Shyam Bihari Upadhyay, director of the **Forensic Science Laboratory (FSL)** in Lucknow for giving incorrect information about the test on recovered powder.

What

- The report that they received two days back from the **Central Forensic Science Laboratory in Hyderabad** stated that recovered powder was not explosive substance but **Silicon Oxide (Quartz)**.
- The **National Investigation Agency (NIA)** which is conducting investigation into the recovery of powder from UP assembly had sent powder to Central Forensic Science Laboratory for test.
- Arvind Kumar said, Dr Upadhyaya has been suspended for different charges including for giving incomplete and incorrect information on powder recovered from UP assembly by **stating it to be PETN**.
- The **NIA took up investigation of the case on July 26** and registered an **FIR against unidentified persons on various sections of IPCs including 121-A (punishment for waging, or attempting to wage war, or abetting waging of war, against the Government of India), 120 B (conspiracy), Unlawful Activities (Prevention) Act and Explosive Act**.

International Literacy Day 2017

The **51st International Literacy Day** is being celebrated on **8th September, 2017** at Vigyan Bhawan, New Delhi and the theme announced by UNESCO is **'Literacy in a digital world'**. The programme would include; felicitation to the dignitaries, distribution of **Saakshar Bharat Awards** to the best performing States, Districts, Gram Panchayats and NGOs.

What

- The International Literacy Day is celebrated on 8th September every year throughout the world**. On this day, in the year 1965 the World Congress of Ministers of Education met in Tehran for the first time to discuss the programme of education at the international level.
- The **UNESCO in its 14th Session in November, 1966, declared 8th September as the International Literacy Day**. Since then, ILD is celebrated on 8th September every year by most of the member countries.
- The **key aspect of the observance of ILD is to mobilize public opinion in favour of struggle against illiteracy**.

4. ILD is a forum to disseminate information on literacy and raise the public awareness and the significance of literacy for individual and national development.
5. **The National Literacy Mission Authority** started celebrating **International Literacy Day every year from 1988 onwards.**
6. The eradication of illiteracy has been one of the major national concerns of the Govt. of India since independence. The occasion of ILD is used for raising public awareness to eradicate illiteracy and create environment in favour of adult education programmes.
7. From 1996 onwards some new elements were introduced to make the programme more attractive.
8. **In the year 1996 a 'Mashal March'** was organized involving school students and literacy functionaries. In subsequent years, variety of activities were included as a part of ILD celebration.

World's First Processed Olive Tea

The olives which are being cultivated in the farms of Rajasthan since 2007 will now reach Europe as the government of Rajasthan has inked a partnership agreement for distribution across UK and the rest of Europe with **Greenleaf Trading Company from the United Kingdom.** A MoU was signed between **Government of Rajasthan** and **Olitia Foods Pvt Ltd in GRAM 2016 for producing olive tea.** Olitia Foods had promised an investment of INR 10 crores for the same. This step aligns with Prime Minister Narendra Modi's vision of doubling the farmers' income. It will be available in lemongrass, holy basil, exotic, mint flavours.

What

1. In the first phase, they will span over UK and then **venture to the other European countries.** This agreement has been made for a substantial amount of olive tea.
2. Greenleaf plans to approach stores like Tesco and Sainsbury's. Olitia Foods has brewed up an alternate to green tea. After years of research, they have come up with the **world's first processed olive tea.**
3. **This is the first time in the world** that machinery has been tailor-made for crushing, tearing and curling of the olive leaves.
4. It was in 2007 that the Government of Rajasthan started cultivating olives considering that the climate there was suitable for olives. **With the help of technology from Israel,** they had planted olives on 5000 hectares of land.
5. It will **medically benefit those who suffer from mental stress, cardiac disease.**

Interim Chairman of GSTN

The **Unique Identification Authority of India's (UIDAI)** chief executive officer (CEO) **A.B. Pandey** was on 8 September 2017 appointed **interim chairman of the goods and services tax network (GSTN)**—the firm providing information technology (IT) backbone and **portal for registration and tax returns under the GST regime.** Pandey was given additional charge days after **GSTN's first chairman Navin Kumar completed his term** on 29 August.

What

1. A.B. Pandey, CEO, Unique Identification Authority of India is **assigned the additional charge of the post of chairman, GSTN** with immediate effect and until further orders.
2. The UIDAI issues unique identification numbers (UID), named as Aadhaar, to all residents of India.
3. **Navin Kumar,** former Indian Administrative Service (IAS) officer from Bihar cadre, was the **first chairman of GSTN.** He was appointed as the firm's chairman in 17 May 2013 for three years, on completion of which his term was extended, with the condition that he would remain in office till he turns 65.
4. The government has constituted a search committee for a new GSTN chairman comprising senior officials from the department of revenue.

5. **GSTN is a section 8** (under new companies Act, not-for-profit companies are governed under section 8), **non-government, private limited company**.
6. **It was incorporated on 28 March 2013** with the **Government of India holding 24.5% equity**.
7. All states of the Indian union, including the national capital territory of Delhi and Puducherry together holding an equivalent equity. The remaining **51% equity is with non-government financial institutions**.
8. The company was set up primarily to provide IT infrastructure and services to the central and state governments, taxpayers and other stakeholders for implementation of the GST.

“Container Terminal of the Year” Award, 2017

Jawaharlal Nehru Port Container Terminal (JNPCT) was awarded **“Container Terminal of the Year” Award for the above 0.6 million TEUs category** at The Gateway Awards 2017 held at Mumbai. The Jawaharlal Nehru Port owned JNPCT won the award for its **proactive strategies to ease congestion, smooth delivery of containers** and revamping of infrastructure to support trade amidst adverse conditions.

What

1. JNPCT has been able to create growth momentum in the last few years as a result of various initiatives to increase the overall efficiency of the terminal and the Port.
2. These initiatives have now started showing positive results and we will continue to further increase our efficiency levels.
3. **The Gateway Award was instituted to recognise and promote best practices, innovation and motivation in the Indian Maritime industry.**
4. The tenth edition of the Gateway Awards showcased the outstanding achievements and exceptional accomplishments of individuals and organisations in the Indian Maritime industry.

First female president in Singapore

Singapore inaugurated its first female president amid stinging criticism that she is taking office without a vote. **Halimah Yacob, a former speaker of parliament** from the Malay Muslim minority, won the presidency in a walkover after authorities decided her rivals did not meet strict eligibility criteria. While the role is largely ceremonial, the president has veto powers on key government appointments and safeguards the country's substantial financial reserves.

What

1. The president also pledged to be independent in exercising her custodial powers over the reserves, which are rarely tapped by the government.
2. **Halimah was a member of parliament for the ruling People's Action Party** for nearly two decades before resigning to contest the presidency.
3. Authorities decided to allow only candidates from the Malay community to foster harmony in the city-state of 5.5 million people which is dominated by ethnic Chinese, and give more opportunities to minorities.
4. **Halimah is the first Malay president of Singapore for almost five decades.** The last was Yusof Ishak, president from 1965 to 1970, the first years of the city-state's independence.

National Hindi Divas

The **National Hindi Divas** is observed on 14 September in Hindi speaking regions of India and other countries with Hindi speaking population. This day **aims to propagate Hindi language and its cultural heritage and values**. It also seeks to promote Hindi as matra bhasha (mother tongue) of India and show its importance as a language in country and world at large.

What

1. On this occasion President Ram Nath Kovind was presented the **Rajbhasha awards** for Year 2016-17 at Rashtrapati Bhawan.

2. These awards were instituted by **Department of Official Language of Union Home Ministry** to recognize excellent contribution of Ministries, Departments and Nationalized Banks in field of Hindi.
3. The day is also celebrated in schools, colleges, offices, organizations and other enterprises with unique programs and competitions organized related to Hindi poems, story recitations and vocabulary quizzes.

National Hindi Divas

1. Hindi Divas is celebrated to mark adaptation of Hindi language as the official language of India by the Constituent Assembly of India on **14 September 1949**.
2. The decision of using Hindi as official language was ratified by Constitution of India which **came into effect on 26 January 1950**.
3. Under the **Article 343 of Indian Constitution**, Hindi written in Devanagri script was adopted as the official language.
4. But presently, there are 2 official languages: Hindi and English.

Rafael Nadal wins 2017 US Open title

Rafael Nadal (Spain) won the 2017 US Open title in men's single category. It was his overall **16th Grand Slam title** and **third US Open title (2010 and 2013)**. In the final match played at USTA Billie Jean King National Tennis Center in New York City, Nadal defeated world number 32, Kevin Anderson from South Africa's by 6-3, 6-3, 6-4 score.

Background

1. The **2017 US Open was 137th edition of tennis' US Open** and the fourth and final Grand Slam event of 2017 season.
2. It was held on outdoor hard courts at USTA Billie Jean King National Tennis Center in New York City.

International Literacy Day

The **International Literacy Day (ILD)** is observed every year on **8 September** to emphasize the **importance of literacy to individuals, society and communities**. The day was **established in 1966 by United Nations Educational, Scientific and Cultural Organization (UNESCO)**. This year it is 51st International Literacy Day. The theme announced by UNESCO for this year is '**Literacy in a digital world**'. In India to observe this day, several functions were organised by the National Literacy Mission Authority. It included distribution of Saakshar Bharat Awards to best performing States, Districts, Gram Panchayats and NGOs. Government uses occasion of ILD for raising public awareness to eradicate illiteracy and create environment in favour of adult education programmes.

Background

1. **The UNESCO in its 14th Session in November 1966** had declared 8th September as International Literacy Day.
2. On this day, in year 1965, World Congress of Ministers of Education had met in Tehran for first time to discuss the programme of education at international level.

National Teachers Day

The **National Teachers Day is observed every year on 5th September in India** to commemorate birthday of **country's first Vice President** and **second President Dr Sarvepalli Radhakrishnan**. Dr Sarvepalli Radhakrishnan was born on **5 September 1888 in Thiruttani** in then Madras Presidency of British India (now in Tamil Nadu). He was Indian philosopher and statesman and one of best known scholars in field of comparative religion and philosophy in India in 20th century.