

My Notes....

NATIONAL

GSLV MARK III ROCKET SUCCESSFULLY TESTED

Indian Space Research Organisation (ISRO) has successfully ground tested India's largest indigenously developed **Cryogenic Upper Stage engine for GSLV Mark III**. It was tested for full 10 minutes at ISRO's Liquid Propulsion Complex (ILPC) at **Mahendragiri in Tirunelveli district of Tamil Nadu**.

What

1. The **C25 stage** is the most powerful upper stage so far developed by ISRO.
2. It uses **Liquid Oxygen and Liquid Hydrogen propellant combination** stored at minus 253 degrees centigrade.
3. The development of C25 cryogenic stage will provide ISRO capability to launch 4 ton class satellites in **Geosynchronous Transfer Orbit (GTO)**, an altitude where satellites revolve in sync with Earth's rotation.
4. So far, the cryogenic engine consisting very complex technology has been developed only by **Russia, US, France, China, Japan and India**.

Significance of Test

1. This was last test in the series before going for actual **GSLV Mark III rocket launch in April 2017** where engine will be put into actual use.
2. The **GSLV Mark III rocket** will be a successor to the GSLV Mark II, which was first launched in 2001 and can carry a heavier payload than the Polar Satellite Launch Vehicle or PSLV.

'TARINI' INDUCTED

The **Indian Navy's second sailboat 'Tarini'** was inducted into service in Goa. The vessel is slated to be the platform for the **first Indian all-women global circumnavigation by the Indian Navy to begin in August**. The induction ceremony, at INS Mandovi Boat Pool, took place in the presence of Navy Chief Admiral Sunil Lanba along with other senior naval officers.

What

1. The **sailboat Tarini** is being inducted into the Navy and is slated to be the platform for **First Indian All-Women Circumnavigation of the globe expedition of the Indian Navy**.
2. Extensive trials of the newly-built vessel were successfully completed in January. The boat is skippered by Lieutenant Commander Vartika Joshi and crew members include Lieutenant Commander Pratibha Jamwal, Lieutenant Aishwarya Boddapati, Lieutenant Patarapalli Swathi, Lieutenant Sh Vijaya Devi and Lieutenant Payal Gupta, it said.
3. The Indian Navy is operating four sailing vessels capable of open ocean deployments – **Tarangini, Sudarshini, Mhadei and Tarini**, all four of which have been built in shipyards at Goa.
4. Indian Navy is attempting to revitalise open ocean sailing and will also be inducting four 40 feet, state-of-the-art open ocean racing sailboats.

NRAI GETS HIGHEST RATINGS FOR VACCINE REGULATIONS

India's vaccine regulatory body **NRAI (National Regulatory Authority of India)** was given the maximum ratings by the **World Health Organisation (WHO) for vaccine regulations**. The ratings were given by WHO after completing the assessment of the status of the NRAI system against WHO NRA Global Benchmarking Tool and measured the maturity of the system in India. Need for assessment **India is one of the main players** in the pharmaceutical industry worldwide and often is referred as pharmacy of the world.

What

1. India, as a large vaccine producing country, is currently supplying **several vaccines to the United Nations agencies** (UNICEF, WHO and PAHO).
2. The assessment was done in respect of **9 different functionalities by a WHO team** comprising lead experts in different areas from WHO Headquarters Geneva, WHO India Country Office, experts from several countries.
3. NRAI was declared functional with a maturity level of 4 which is highest level as per currently evolved definitions in respect of 5 functions, and maturity level 3 in respect of 4 functions.
4. **Maturity level 4 indicates good results and sustained improvement trends**, while level 3 reflects systematic process based approach, early stage of systematic improvements, data availability regarding conformance to objectives and existence of improvement trends.

About NRAI

NRAI comprises the **Central Drugs Standard Control Organisation (CDSCO)**, State Drug Regulatory Authorities, Adverse Events Following Immunization (AEFI) and Pharmacovigilance Programme of India (PvPI) structures at the Central and States levels.

THIRD NATIONAL DAM SAFETY CONFERENCE HELD

Third National Dam Safety Conference organized by **Central Water Commission** in association with **Uttarakhand Jal Vidyut Nigam** and **IIT Roorkee** concluded at Roorkee. The conference focused on key challenges in dam safety field that are being encountered in the on-going **Dam Safety Rehabilitation and Improvement Project (DRIP)** implementation. Sharing of the knowledge, experience, innovations, novel technologies etc. by different national and overseas experts further helped in reshaping the strategies for effectively managing the uncertainties associated with dam design, construction, operation, and maintenance.

What

1. The conference received an overwhelming response with over 400 delegates attending and submission of over **70 technical papers from experts within and outside India**. About 40 national and overseas organizations showcased their technologies, products and services through Exposition organized at the conference venue. The professionals from USA, Australia, Japan, UK, France, Italy, Spain, Netherlands, and Germany attended this event.
2. **Dams have played a key role in fostering rapid and sustained agricultural and rural growth and development**, which have been key priorities for the Govt. of India since independence.
3. Globally India ranks third after China and the United States of America in terms of number of large dams with a total storage capacity of about 283 billion cubic meters.

ICGS AYUSH COMMISSIONED

Indian Coast Guard Ship **ICGS AYUSH** was commissioned at **Kochi**, Kerala by Vice Admiral AR Karwe, Flag Officer commanding-in- Chief, Southern Naval Command. ICGS AYUSH is the **20th and the last in the series of 20 Fast Patrol Vessels (FPVs)** built by Cochin Shipyard Ltd.

What

1. ICGS AYUSH is fitted with **state-of-the-art navigational and communication equipment** including Integrated Bridge System (IBS) and Machinery Control System (MCS).
2. The ship is capable of undertaking multifarious tasks such as surveillance, interdiction, search and rescue, anti-smuggling and medical evacuation.
3. It will also play a secondary role of providing a communication link and escort coastal convoys in times of war.

4. The ship will be **based at Krisnapatnam (Andhra Pradesh)**, under the administrative and operational control of Commander, Coast Guard Region.
5. FPVs are intended to help secure Indian waters by patrolling within the Exclusive Economic Zone and help in fisheries protection.

NEW MALARIA VACCINE FOUND 100% EFFECTIVE

A **new vaccine for malaria is up to 100% effective when assessed at 10 weeks after last dose**, according to the results of a clinical trial. The vaccine called **Sanaria PfSPZ-CVac** incorporated fully viable — not weakened or otherwise inactivated — malaria pathogens together with the medication to combat them. Malaria parasites are transmitted by the bite of **female Anopheles mosquitoes**.

What

1. The **Plasmodium falciparum parasite** is responsible for most malaria infections and almost all deaths caused by the disease worldwide.
2. Most of the previous vaccines which have been tried involved the use of individual molecules found in the pathogen. However, they were unable to provide sufficient immunity to the disease.
3. The study by University of Tubingen in Germany in collaboration with the biotech company Sanaria involved 67 healthy adult test persons, none of whom had previously had malaria.
4. That protection was probably caused by **specific T-lymphocytes and antibody responses to the parasites in the liver**.
5. This enabled the researchers to exploit the behaviour of the parasites and the properties of chloroquine.
6. Once the person is infected, the **Plasmodium falciparum parasite migrates to the liver to reproduce**.
7. Malaria only breaks out when the pathogen leaves the liver, entering the bloodstream and going into the red corpuscles, where it continues to reproduce and spread.

INDIA'S LARGEST DEFENCE PARTNER

Despite **India expanding its military ties with the US, Europe and Israel**, **Russia** remains New Delhi's number one supplier of weapons with America at a distant second, according to a report on global arms trade in the last five years. From 2012 to 2016, **Russia supplied 68 per cent of India's arms import**, as per the survey by **Stockholm International Peace Research Institute (SIPRI)** - an international think-tank that researches on conflict, armaments, arms control and disarmament.

What

1. In the same period, **the US supplied 14 per cent of arms to India**, followed by Israel (7.2 per cent).
2. The SIPRI report also foresees **Russia maintaining the lead in supplying weapons to India** - which has emerged as the biggest importer of major arms with overseas procurements exceeding that of China and Pakistan.
3. Based on existing orders and weapons, Russia will remain, by far, the main supplier of major arms to India for the foreseeable future.
4. However, **India expects increasing deliveries due to several major orders** from France (another traditional supplier) and from the US, South Korea and Spain - all of which only recently became suppliers of major weapons to India.
5. Prime Minister Narendra Modi has been making increasing efforts towards his flagship "**Make in India**" initiative that also endeavours to modernize the country's ageing military equipment.
6. Modi has pledged \$250 billion for **the domestic defence industry to manufacture fighter jets, guns and submarines locally**.
7. But the SIPRI reports hints that **India will be overwhelmingly reliant on foreign imports**, mainly from **Russia, the US and Israel** -- as has been the trend in the last five years.

8. **For the UK, India is the second largest buyer, with 11 per cent share of its exports.**
9. **47 per cent of US weapons went to countries in the Middle East.**
10. The five biggest arms exporters were the US, Russia, China, France and Germany, together accounting for 74 per cent of the total volume of trade in weapons in the last five years.

2ND STATE TO PROHIBIT DUAL MRP

Rajasthan has become the second state in the country after Maharashtra to prohibit all stadiums, restaurants, airports and cinema halls from charging any price more than the printed **Minimum Support Price (MRP) for packaged food items such as drinking water bottles, wafer and biscuit packets. The state also prohibited levying dual MRP for the same item. An order issued earlier this month, **state government has directed all district commissioners** and local authorities to take all possible action against such practice.**

What

1. **This Move comes after a letter was issued by the Centre in December 2016**, which had directed state governments and union territories to stop the practice of dual MRP.
2. Directive was issued after it got several complaints from consumer rights activities and others that many cinema halls, stadiums, multiplexes are charging dual MRP for the same packaged food items in **clear violation of Packaged Commodity Rules 2011 and Legal Metrology Act, 2009.**
3. The state government also **issued a notice to the BCCI directing it to instruct all its stadiums and sister associations** to stop this practice during cricket matches particularly during the **Indian Premier League (IPL).**

EXERCISE TROPEX 2017 CONCLUDED

The Indian Navy's Annual **Theatre Level Readiness and Operational Exercise (TROPEX 17)** was conducted on the Western Seaboard from 24 Jan 17 till 23 Feb 17. The month long exercise saw participation of over 45 ships from **both the Western and Eastern Naval Commands of the Indian Navy**, including the aircraft carrier **INS Vikramaditya**, 05 submarines including the nuclear powered Chakra, 50 Naval aircraft, 11 ships from the Coast Guard, troops from the Army and 20 aircraft from the Air Force including Su 30s, Jaguars and AWACS.

What

1. **The exercise, in complete coordination with the Army and Air Force**, was conducted in phases to test the various facets of war-fighting and joint combat capabilities of the armed forces to respond to given threat situations.
2. The 2017 edition of TROPEX included the conduct of large scale 'Out of Area Contingency' in island territory, which saw participation of all three services and their special forces.
3. **TROPEX 2017 culminated with Tactical Phase conducted over 10 days**, and saw intense action by both the opposing forces. The interaction of the forces helped validate operational war fighting concepts and provided valuable lessons to sharpen combat skills.
4. TROPEX 2017 assumes great significance in the backdrop of current security scenario.
5. The exercise provided an apt-opportunity to test the combat capability of the Indian Navy, Indian Army, Indian Air Force and Coast Guard, and strengthened interoperability and joint operations in complex conflict situation.

INDIA'S FIRST INTEGRATED HELIPORT

Civil Aviation Minister Ashok Gajapathi Raju in New Delhi inaugurated **the country's first integrated heliport**. The country's first heliport, located at Rohini locality in north west Delhi, **has been built by state-owned chopper operator Pawan Hans**. The heliport, erected over an area of 25 acres, has come up with an investment of Rs 100 crore. It sports

a terminal building, four hangars and nine parking bays, along with maintenance, repair and overhaul (MRO) facility.

BHARAT QR CODE LAUNCHED

The Government has launched **Bharat quick response (QR) code** to enable digital payments without card swiping machines. It is **world's first interoperable payment acceptance solution** launched by Indian Government to move towards **less-cash economy**.

What

1. It has been developed by jointly by **National Payments Corporation of India (NPCI)**, Visa, MasterCard and American Express under instructions from Reserve Bank of India (RBI).
2. It works as common interface for the MasterCard/Visa/RuPay platforms and also facilitate acceptance of Aadhaar-enabled payments and **Unified Payments Interface (UPI)**.

What is QR code?

1. QR code (Quick Response code) is a **two-dimensional (matrix) machine-readable bar code** made up of black and white square.
2. This code can be read by the camera of a smartphone. It is used for storing URLs or other information that link directly to text, emails websites phone numbers.
3. It can store up to **7089 digits** as compared to conventional bar codes which can store max 20 digits.
4. It encodes same amount of data in one-tenth the space of a traditional bar code.

NATIONAL BIODIVERSITY CONGRESS

The **National Biodiversity Congress (NBC) 2017** was held in Thiruvananthapuram, capital of Kerala. The event is hosted by the Kerala State Biodiversity Board. NBC is one of the significant biodiversity mega events of the country. It aims to **identify practical, evidence-based case studies** at the regional level to support the plan of action.

What

1. The focal theme this year was **"Mainstreaming Biodiversity for Sustainable Development"**.
2. National Biodiversity Conference, governed by a national advisory committee comprising biodiversity conservation experts was also held.
3. Number of experts in field of biodiversity conservation had delivered keynote address and plenary lectures on variety of key issues related to biodiversity conservation, sustainable utilisation and benefit sharing.
4. Members of academic and research institutions, civil society, biodiversity management committees, NGOs, farmers, students, corporates also participated in the event.

NATIONAL TRANSIT ORIENTED DEVELOPMENT POLICY

The Union Urban Development Ministry has formulated **'National Transit Oriented Development (TOD) Policy'** to address the challenges of urbanisation. The policy framework aims **to promote living close to mass urban transit corridors** like the Metros, monorail and bus rapid transit (BRT) corridors.

What

1. Under the new Metro policy, **TOD has been made mandatory and also an essential reform under the green urban mobility scheme** and given priority for receiving central assistance.
2. The Union Government already has notified the TOD policy in early 2015, however, there was no clarity on the process for management of open spaces, various sanctions, parking space, water requirement, etc.
3. Under it, States/UTs are required to incorporate TOD in their master plans and development plans of cities besides identifying 'influence zones' from transit corridors for tapping revenue streams.

4. The **central TOD policy** will help the states to develop an in-depth understanding of the symptoms and causes of the challenges currently faced by Indian cities. Besides, urban design and planning in the form of TOD, is being incentivised by the ministry under two more initiatives viz., Metro policy and green urban mobility scheme.

INTERNATIONAL

ARAB WORLD'S FIRST SPACECRAFT

The **UAE has unveiled plans to build the first city on Mars by 2117** as the energy-rich country looks to transport people to the Red Planet over the next few decades.

What

1. The **UAE will set a plan to prepare national cadres** that can achieve scientific breakthroughs to facilitate the transport of people to the Red Planet over the next decades.
2. The **100-year plan** will involve scientific research programmes to nurture national cadres specialised in space sciences at universities in the UAE. It will also entrench a passion for space in younger generations.
3. The announcement was made on the **sidelines of the World Government Summit in the presence of representatives of 138 governments**, six major international organisations, as well as leading international tech companies, the Gulf News reported.
4. The new project will be associated with research themes featuring the exploration of transportation means, energy and food on the Red Planet. It will also try to find faster transportation methods for travelling to and from Mars.
5. A virtual presentation depicting a preliminary concept for the city on Mars was made during the announcement.
6. The scientific initiative will first be implemented by an Emirati scientific team, and will eventually expand to include international scientists and researchers that will run in parallel with the coordination of human research efforts in the field of exploring and inhabiting Mars.
7. **The 2117 Mars initiative** is a long-term project, which will first help develop our education, universities and research centres that will empower young Emiratis to enter all disciplines of scientific research fields.
8. In 2015, the UAE announced its Mars Probe mission, which will send the **Arab world's first spacecraft to the Red Planet in a scientific exploration mission** that will land on planet in 2021.

INDIA, PAKISTAN TO EXTEND PACT ON NUCLEAR MISHAPS

India and Pakistan on 20 February 2017 **extended their bilateral pact**, dealing with reducing the risk of nuclear weapon-related accidents, for a period of five years. **In accordance with Article 8 of the agreement between the Republic of India and the Islamic Republic of Pakistan** on reducing the risk of accidents relating to nuclear weapons, both countries have agreed to extend the agreement for a further period of five years.

What

1. The existing validity was up to February 20, 2017.
2. According to the pact, which was inked in 2007, both **India and Pakistan** shall notify each other immediately in the event of an accident relating to nuclear weapons, under their respective jurisdiction or control, which could create the risk of a radioactive fallout, with adverse consequences for both sides or create the risk of an outbreak of a nuclear war between the two countries.
3. The parties may hold consultations, as mutually agreed upon, to review the implementation of the provisions of this agreement as well as to consider possible amendments aimed at furthering the objectives of this agreement.

NDB TO FINANCE TECHNOLOGICAL INNOVATION PROJECTS

The **New Development Bank (NDB)** set up by the **BRICS** plans to provide lending to technological innovation projects, its vice president Zhu Xian has said. Established to meet emerging economies' funding needs, the multilateral lender approved loans worth \$1.5 billion last year, mainly to finance clean energy and infrastructure developments in BRICS countries - **Brazil, Russia, India, China and South Africa**.

What

1. The **BRICS' share of the world economy** shot up from 8.2 per cent in 2002 to 22.2 per cent in 2015.
2. The BRICS now represents two thirds of the developing world's economy.
3. The bank aims to foster technological innovation in developing nations through its financing, capability building and knowledge sharing, Zhu said at a financing forum held in Xiamen city, state-run Xinhua news agency reported.
4. This year's BRICS summit would be held in Xiamen in September.
5. The developing nations account for more than 35 per cent of the world economy, but lack an equal share of deciding power in traditional multilateral lenders.
6. Trillions of dollars are needed every year as the developing world strives to upgrade industries and develop new energy sector.
7. That will be the priority of BRICS NDB and Asian Infrastructure Investment Bank (AIIB).
8. The **BRICS NDB was established in 2014** with an initial fund of \$100 billion pooled from five BRICS countries.
9. The **bank was launched in Shanghai in July 2015 and issued its first loan in April last year**.

INDIA, RWANDA SIGN 3 MOUS

India and Rwanda signed MoUs for promoting innovation, easing visa requirements and boosting air connectivity between the two countries. The countries will set up an **entrepreneurship development centre in Kigali**.

What

1. **Rwanda Air will start services to India** in the coming months and both countries will mutually exempt visa requirements for diplomatic and official passport holders.
2. Rwanda Prime Minister Anastase Murekezi said the three MoUs will boost economic and business ties.
3. Rwanda and India share important ties and we are committed to make this relationship grow stronger.

INDIA, ISRAEL TO JOINTLY DEVELOP MISSILE FOR ARMY

India has approved a deal to jointly develop a **medium range surface-to-air missile (MR-SAM) system for the Army** in a ₹17,000-crore deal. This is the latest in a series of **other variants of SAM systems** for the Navy and the Air Force being jointly developed with Israeli help under deals estimated at billions of dollars.

What

1. The **Cabinet Committee on Security (CCS)**, headed by Mr. Modi, at a meeting, gave the go-ahead for the deal to be executed by the **Defence Research and Development Organisation (DRDO)** and Israel Aircraft Industries (IAI).
2. The **deal is for 200 missiles for five regiments**, each getting 40 units. The missile has a range of 50-70 km.
3. The system will be **based on the older Barak system of Israel**, which is in use in India. It is being changed as per requirements.
4. The systems will be **manufactured in India and would have an 80% indigenous content**.
5. The DRDO would play a crucial role in developing the target homing system. Deliveries would begin in 2023.
6. The two countries are also in an advanced stage of negotiations for the purchase of two more long-range Phalcon **Airborne Warning And Control System (AWACS)**.
7. The CCS had approved the deal for additional AWACS last year that is expected to cost 7,500 crore.

8. India now operates **three Phalcon AWACS with Israeli radars** mounted on Russian IL-76 transport aircraft, under a \$1-billion tripartite deal with Russia, signed in 2003.
9. Russian officials said at the recent Aero India that India had ordered two IL-76 aircraft to be converted to AWACS.
10. They were hopeful of a deal during Mr. Modi's visit, and added that discussions were on for additional long-range drones.
11. **India and Israel have stepped up their defence relations** since Mr. Modi came to power.

INDIA, ADB INK LOAN PACT FOR INDUSTRIAL CORRIDOR

India and ADB have signed USD 375 million pact for loans and grants to develop 800-km Visakhapatnam-Chennai Industrial Corridor, which is the first phase of a planned 2,500-km East Coast Economic Corridor. ADB had last September approved USD 631 million in loans and **grants for the industrial corridor**.

What

1. The **Asian Development Bank** approved loans comprising a USD 500 million **multitranches facility to build key infrastructure** in the four main centers along the corridor -- **Visakhapatnam, Kakinada, Amaravati, and Yerpedu-Srikalahasti** in Andhra Pradesh.
2. The first tranche of USD 245 million that was signed will finance sub projects to develop high-quality internal infrastructure in 2 of the 4 nodes of the corridor -- Visakhapatnam and Yerpedu-Srikalahasti.
3. Another component of the approved ADB funds that the signatories signed was a **USD 125 million policy-based loan** that will be used for capacity development of institutions engaged in corridor management, **provide support to enhance ease of doing business** and for supporting industrial and sector policies to stimulate industrial development.
4. **Tranche-1 loan** will have a **25-year term**, including a grace period of 5 years, a 20-year straight line repayment method at an annual interest rate determined in accordance with ADB's LIBOR-based lending facility.
5. **Manila based ADB**, established in 1966, is owned by **67 members - 48 from the Asian region**.

VENEZUELA, LIBYA AGAIN LOSE UN VOTE

Venezuela and Libya have been suspended from voting in the U.N. General Assembly for the second time in two years because of millions of dollars in unpaid dues to the world body. The Assembly decided this week that the two oil producers and four other countries would lose their votes in the 2016-2017 sessions because they're over two years behind on dues, which vary according to factors including national income.

What

1. As of January, the most recent figures available, **Venezuela would have to make a minimum \$24 million payment** to get under the two-year threshold and get its voting rights restored. Libya's minimum payment is \$6.5 million.
2. The sums are far smaller, ranging from \$265,000 to less than \$12,000, for the other countries: Papua New Guinea, Sudan, Vanuatu and Cabo Verde, formerly called Cape Verde.
3. None of the nations' U.N. missions immediately responded to inquiries.
4. The **General Assembly voted last fall to give such exceptions to Comoros, Guinea-Bissau, Sao Tome and Principe, and Somalia**.
5. **Venezuela's oil-dependent economy has spiraled into crisis since world oil prices began a plunge in 2014**. Venezuelans are grappling with triple-digit inflation and widespread food shortages.
6. **Libya's economy has suffered greatly since the country was hurled into turmoil by the 2011 uprising** that toppled and killed longtime dictator Moammar Gadhafi. Violent militia activity has taken a major toll on oil production in the last few years, though output has been rising of late.

PAKISTAN, TURKEY SIGN 10 AGREEMENTS

Pakistan has signed 10 agreements with Turkey to enhance bilateral cooperation in various fields, including exchange of financial intelligence relating to money laundering, hydrocarbon and defence cooperation. The agreements and MoUs were signed during Prime Minister Nawaz Sharif's visit to Turkey from February 22-24 during which he co-chaired the **5th Session of Pakistan-Turkey High Level Strategic Cooperation Council (HLSCC)**.

What

1. At the conclusion of the **5th Session of HLSCC**, the two countries signed **10 Agreements/MOUs**, in a number of areas of bilateral cooperation, including the Joint Declaration.
2. The agreements and MoUs were signed in the **fields of hydrocarbons, environment, forestry, information, exchange of financial intelligence relating to money laundering** and exchange of armed forces personnel.
3. The two sides also agreed to **expeditiously complete the work on developing a comprehensive, long-term and forward-looking framework for defence cooperation** and enhance partnership between the defence industries of the two countries.
4. They also expressed satisfaction at their existing close cooperation at regional and multi-lateral fora, including on United Nations Security Council reform process and issues pertaining to global non-proliferation agenda.
5. The **Joint Declaration on Turkey-Pakistan Strategic Relationship for Peace and Prosperity** issued at the end of the meeting condemned in the strongest possible terms the recent terrorist attacks in Pakistan and Turkey; expressed firm resolve to fight the common threats faced by both countries; reaffirmed mutual support on issues of core national interest; and agreed to intensify collaboration in diverse fields.
6. **Established in 2009, the HLSCC serves as a framework for consultations at the highest political level between the two sides**, and consists of six Joint Working Groups (JWGs) in the areas of energy, trade, banking and finance, education, communications and railways and culture and tourism.
7. **So far 60 agreements and MoUs have been signed under the HLSCC framework in various areas.**

INDIA, GERMANY RATIFY SOCIAL SECURITY AGREEMENT

India and Germany have ratified the Social Security Agreement (SSA), which will come into force from May 1 this year, to help **promote more investment flows between the two countries**.

What

1. **The SSA will also integrate the provisions of the 2008 social insurance pact** that exempts detached workers of the two countries from making social security contributions in either countries so long as they were making such contributions in their respective countries, the External Affairs Ministry said, adding the 2008 pact will then cease to be in force. The two sides have exchanged instruments of ratification.
2. The **new agreement establishes the rights and obligations of nationals of both countries** and provides for equal treatment of the nationals of both countries and unrestricted payment of pensions even in the case of residence in the other contracting state (benefits export principle).
3. As on date, India has signed and operationalised **Social Security Agreements (SSAs)** with 18 countries -- Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Japan, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland, and South Korea

ECONOMY

WTO RATIFIES FIRST MULTILATERAL TRADE DEAL

The **first multilateral deal agreed at the World Trade Organization (WTO) came into force** on 22 February 2017, a step billed as a milestone for the body facing unprecedented threats from a hostile US administration.

What

1. The **Trade Facilitation Agreement (TFA)** has now been **ratified by 112 of the WTO's 164 members**, crossing the two-thirds threshold needed for activation, the Geneva-based organisation confirmed.
2. Under the deal, **nations agreed to simplify and standardise customs procedures at borders to make it easier for goods to flow around the world.**
3. TFA was estimated to trim global trade costs by more than 14% and could boost global growth by half a percentage point per year.
4. **The trade facilitation agreement in the biggest reform of global trade this century.**
5. Poorer countries are expected to reap the most benefits from the TFA through provisions that will improve access to richer markets for their products.
6. The WTO has suffered high-profile setbacks in trying to craft major deals, notably in the stalled Doha Round process, which is striving to re-write global trading rules.
7. When negotiations on the **TFA were successfully concluded in 2013 it marked a major victory for the WTO.**
8. The **protectionist agenda he hyped during the campaign has persisted since his inauguration**, including through the nomination of Robert Lighthizer as US trade representative.
9. Washington could ignore WTO rules in order to redress what he considers trade imbalances, notably ones he claims favour China.

ECONOMIC FREEDOM INDEX 2017

India was ranked **143rd out of 186 economies in the annual Index of Economic Freedom 2017** that measures the degree of economic freedom in the countries of the world. The index was released by top US based Think Tank, The Heritage Foundation. In this edition, **India's overall score was 52.6 points, 3.6 points less than scored in 2016** when it was ranked 123rd.

What

1. The **Index of Economic Freedom** ranks countries based on score ranging 0 to 100, with 0 being the least free and 100 the most free.
2. The score is based on ten factors of economic freedom, separated into four categories, using statistics from international organizations like World Bank, IMF, Economist Intelligence Unit and Transparency International.
3. Based on the score, countries are grouped in 5 different categories, Free (80–100), Mostly Free (70.0–79.9), Moderately Free (60.0–69.9), Mostly Unfree (50.0–59.9) and Repressed (0–49.9).
4. Top 5 countries in this edition of index are **Hong Kong (1st)**, Singapore (2nd) and New Zealand (3rd), Switzerland (4th) and Austria (5th).
5. India with 52.6 points score was ranked 143rd. It was placed in the category of “**Mostly Unfree**” Economies (points ranging from 50.0-59.9).
6. India's neighbours, Nepal (125th), Sri Lanka (112th), Pakistan (141st), Bhutan (107th), and Bangladesh (128th) have surpassed India.
7. Only Afghanistan (163rd) and Maldives (157th) were ranked below India.
8. China with a score of 57.4 points ranked 111th which is 5.4 points above 2016 score. United States was ranked 17th with a score of 75.1 points. The world average score was 60.9, highest recorded in the 23-year history of the index. 49 countries majority of developing countries and also Norway and Sweden have achieved their highest-ever index scores.

India related facts

1. India's progress on **market-oriented reforms** has been uneven.
2. India has combination of advance technology and manufacturing sectors of developed world as well as traditional sectors, characteristic of a lesser developed economy.
3. Extreme wealth and poverty coexist in India as it both modernises rapidly and struggles to find paths to inclusive development for its large population.
4. India is a significant force in world trade, but underdeveloped infrastructure, corruption and poor management of public finance undermines its overall development.

MODEL LAW ON CONTRACT FARMING FINALISED

In a move intended to **protect farmers against price volatility, particularly in perishables like onions, tomatoes and potatoes**, the Niti Aayog is drawing up a **model law on contract farming** for approval by the Cabinet by June. As market fluctuations have made distress sales -- with dramatic photographs of farmers dumping kitchen staples on roads -- a regular feature, the centre's think-tank is considering options that can reduce the risks for farmers by balancing entry of private players with safeguards for agriculturalists.

What

1. NITI Aayog had already come out with an initial draft in October, further discussions and consultations were required to tighten certain provisions which would arm farmers with legal safeguards.
2. Bringing a model law on contract farming was announced as part of reform measures in the Union Budget.
3. A law on contract farming is **considered important for entry of private players into the sector** as it would induce competition and ensure assured and better price of agriculture and horticulture produce to farmers through advance agreements. Such contracts could offered assured price.
4. Once states come on board and adopt the proposed law, farmers can enter into agreements with private entities\buyers who may, in turn, invest in technology and bring in management skills to increase productivity and reduce transaction costs.
5. At present, **farmers can suffer losses when a bumper crop causes a glut in the market** or in a situation where their produce is unable to reach the 'mandis' in time for a variety of reasons. Therefore, the main idea behind contract farming is to integrate farmers to agro-processing units for better price realisation. It will also take care of their post-harvest losses, if any.
6. A **model Agricultural Produce Market Committee (APMC) Act** was **first circulated to states during 2003 for contract farming agreement**. Though 20 states had amended the legislation, **only 12 have so far notified rules for implementation**.
7. The new model act will be an improved version, keeping in mind utmost safeguards to small and marginal farmers as they would also be in a position to enter into an agreement with big private players as a group or cooperative.

GST COUNCIL CLEARS LAW TO COMPENSATE STATES

The **Goods and Services Tax (GST) Council**, at its 10th meeting on 18 February 2017, ratified **the draft law for compensation to states**. However, it could not ratify the three enabling laws — **Integrated GST (IGST)**, **State GST (SGST)** and **Central GST (CGST)** draft laws because of some contentious issues that cropped up.

What

1. It was also decided at the meeting, held in **Udaipur, that a fourth law**, for Union Territories, would also be drafted on the lines the SGST draft law, and would be cleared by Parliament.
2. The legally vetted draft of the compensation Bill came before the Council and was approved. It will not come before the Council anymore, and will be taken to the Cabinet for approval. After that, we will make efforts to pass it in the second leg of the Budget session.
3. During the legal drafting of the **CGST, SGST and IGST laws**, certain contentious issues came to the fore and it was necessary to place all the issues before the Council again to take specific directions. So, the legal committee of the GST Council sought clarifications from us today. These will be incorporated, and at the March 4-5 meeting in Delhi, these laws will be cleared.
4. The FM said the legal committee had queries from the all-powerful Council, which consists of Jaitley and state finance ministers, on the composition of an appeal tribunal in the Centre and states, eligibility of members, delegation of powers, exemptions during the transition phase, services and **value-added tax (VAT)** in work contracts where it will be taxed, and the definition of agriculture.
5. It now looks highly probable that the GST laws would be formally approved by the Council in the next meeting and the central laws would be put up before Parliament in the second half of the Budget session, starting on March 9.

INDIA EMERGES 12TH LARGEST HOLDER OF US GOVT SECURITIES

India became the 12th largest holder of US government securities at the end of 2016, with exposure worth \$118.2 billion. With holdings worth \$1.09 trillion, Japan remained the largest holder of these securities followed by neighbouring China with exposure to the tune of \$1.06 trillion. Latest data available with the US Treasury Department showed that India's holding stood at \$118.2 billion in December last, slightly lower than \$118.7 billion seen in November. At **the end of December 2015**, India's exposure was to the tune of \$116.8 billion.

What

1. As per the data, **India was the 12th largest holder of these securities**. After **Japan and China, Ireland was at the third place** with holdings worth \$288.2 billion, followed by Cayman Islands (\$263.5 billion), Brazil (\$259.2 billion) and Switzerland (\$229.3 billion).
2. Other nations having more holdings than India were Luxembourg (\$223.4 billion), United Kingdom (\$217.1 billion), Hong Kong (\$191.4 billion), Taiwan (\$189.3 billion) and Belgium (\$120.4 billion).
3. **India is at the third place among BRIC grouping after China and Brazil** in terms of exposure. Russia held American government securities worth \$86.1 billion in December 2016.

LABOUR REGISTERS FOR FIRMS REDUCED

Enhancing ease of doing business, the government has **reduced the number of registers to be maintained under labour laws to 5 from 56 for 58.5 million establishments**. These registers are related to **details of employees, their salaries, loans/recoveries, attendance, and others**.

What

1. **This exercise will help establishments save cost and efforts** and ensure better compliance with labour laws.
2. Under **various Central Labour Acts**, there is a requirement of maintenance of registers depending upon the threshold of the number of employees by the establishments in agriculture and non-agriculture sectors.
3. Going by the **Sixth Economic Census of Central Statistical Office** conducted during 2013-2014, India has about 58.5 million establishments in agricultural and non-agricultural sectors combined.
4. While reviewing the requirement of filing various returns/registers/forms provided under nine Central Labour Acts, it was found that there were several overlapping/redundant fields that could be cut off.
5. An intention notification was **issued on November 4, 2016**, for reducing the number of registers/data fields to ministries, states, other stakeholders, besides placing it in public domain.
6. All previous registers envisaged under various Acts/Rules have been omitted and replaced with **only five common registers**. Such an exercise has reduced the number of data fields in five registers to only 144 from the then 933 fields in 56 registers.
7. Labour ministry has also undertaken to develop a software for these five common registers.
8. After development of software, those will be put on **Shram Suvidha Portal** for free download with an **aim to facilitate maintenance of those registers in a digitised form**.
9. The Labour Laws under which these registers are maintained include **The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996**, **The Contract Labour (Regulation and Abolition) Act, 1970**, **The Equal Remuneration Act, 1976** and **The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979**.
10. These laws also include **The Mines Act, 1952**, **The Minimum Wages Act, 1948**, **The Payment of Wages Act, 1936**, **The Sales Promotion Employees (Conditions of Service) Act, 1976** and **The Working Journalists and Other Newspaper Employees (Conditions of Service) Act, 1955**.

IMF ANNUAL INDIA REPORT

The **adoption of the GST could help raise India's medium-term GDP growth** to over eight per cent and create a single national market for enhancing the efficiency of the movement of goods and services, the IMF said. At the same time, **the International Monetary Fund (IMF)** also expressed concerns over the implementation of the Goods and Service Tax (GST).

What

1. Although **some uncertainties remain around the design and pace of implementation of the GST**, its adoption is poised to help raise India's medium-term GDP growth to above eight per cent as it will create a single national market and enhance the efficiency of intra-Indian movement of goods and services, the IMF said in its annual country report on India.
2. The IMF said larger than expected gains from the GST and further structural reforms could lead to significantly stronger growth, while a sustained period of continued low global energy prices would also be beneficial to India.
3. Noting that India's tax revenue-to-GDP ratio (at around 17 and a half per cent) remains considerably below than its emerging market peers, the IMF said the implementation of a robust GST should be a key priority given its growth-enhancing effects.
4. The GST should have minimal exemptions, uniform cross-state rates, and as few tax rate tiers as possible.
5. The **GST would provide for a significant improvement over the current indirect tax system**. Tax reform priorities going forward include continuing the phased reduction of the corporate income tax rate from 30 to 25 per cent over four years, coupled with a simultaneous reduction in tax deductions.

The destination-based GST will create, for the first time, a single Indian market, and will greatly enhance India as an investment destination.

SCIENCE AND TECHNOLOGY

'CYBER SWACHHTA KENDRA' LAUNCHED

The government through its **Computer Emergency Response Team (CERT-in)** launched "**Cyber Swachhta Kendra**" — a new desktop and mobile security solution for a secure cyber space in the country. The new solution will notify, enable cleaning and secure systems of end-users to prevent further infections.

What

1. **India today joined the distinguished club of countries** that have malware-cleaning systems for the use of its citizens. As of now, **we have 13 banks and internet service providers using this facility**.
2. This **centre will work in coordination with the internet service providers (ISPs)** and Industry. This Kendra will also enhance awareness among citizens regarding botnet and malware infection along with measures to be taken to secure their devices.
3. The government will set up **10 more STQC (Standardisation Testing and Quality Certification) testing Facilities**. Testing fee for any start-up that comes up with a digital technology in the quest of cyber security will be reduced by 50 per cent. Empower designated forensic labs to work as the certified authority to establish cyber crime.
4. **M-Kavach tool offers a comprehensive mobile device security solution for Android devices** addressing threats related to mobile phones.
5. **AppSamvid is a desktop solution** which protects systems by allowing installation of genuine applications through white listing. This helps in preventing threats from malicious applications.
6. The move comes at a time when over 50,300 cybersecurity incidents like phishing, website intrusions and defacements, virus and denial of service attacks have been observed in the country during 2016.
7. As per the information reported to and tracked by **Indian Computer Emergency Response Team (CERT-In)**, a total number of 44,679, 49,455 and 50,362 cyber security incidents were observed during the years 2014, 2015 and 2016, respectively.

8. The **Cyber Swachhta Kendra is part of the government of India's Digital India initiative** under the Ministry of Electronics and Information Technology (MeitY).

HIGH-QUALITY GRAPHENE FROM SOYBEAN

In a breakthrough, scientists have used the **humble soybean to make the world's strongest material graphene** commercially more viable. **Graphene is a carbon material** that is one atom thick. Its thin composition and high conductivity means it is used in applications ranging from miniaturised electronics to biomedical devices.

What

1. These properties also enable thinner wire connections; **providing extensive benefits for computers**, solar panels, batteries, sensors and other devices. Until now, the high cost of graphene production has been the major roadblock in its commercialisation.
2. Previously, **graphene was grown in a highly-controlled environment with explosive compressed gases**, requiring long hours of operation at high temperatures and extensive vacuum processing. Scientists at Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Australia have developed a novel "GraphAir" technology which eliminates the need for such a highly-controlled environment.
3. The technology grows graphene film in ambient air with a natural precursor, making its production faster and simpler. "This ambient-air process for graphene fabrication is fast, simple, safe, potentially scalable, and integration friendly."
4. **Graphene has excellent electronic, mechanical, thermal and optical properties as well.** Its uses range from improving battery performance in energy devices, to cheaper solar panels.

'SCIENCE EXPRESS' TRAIN FLAGS OFF

A '**Science Express**' train was flagged off on a seven-month journey that will cover **68 stations across the country**, including **Agartala and Lumding in the northeast**, to spread awareness about climate change. Named '**Science Express Climate Action Special**', with the collaborative efforts of ministries of Railways, Environment and Science and Technology, the 16-coach train will travel to Tripura and to the **north bank of the Brahmaputra for the first time.**

What

1. Exhibits of eight coaches of the train are devoted to information, caste studies and materials related to various aspects of climate change.
2. The exhibitions mounted by the Environment Ministry will also showcase the underlying science, impacts, adaption activities, mitigation solutions and policy approaches in a manner that is easy to understand and interesting for not just school students but also the masses.
3. The **focus is on what can be done at school**, on roads, at home and in offices and also on the concept of lifestyle choices.
4. A kids' zone is set up for children from Class 4 and below to participate in fun-filled activities, game and puzzles in science, mathematics and environment.
5. Exhibits and activities have been put up by the Department of Science and Technology and Department of Biotechnology in the remaining eight coaches.
6. The train will stop at each station for students and others to visit the exhibitions in coaches. The train will cover 68 stations ending the journey at Gandhinagar station on September 8.

'PHYSICALLY UNCLONABLE FUNCTIONS' (PUF)

Scientists at the **Indian Institute of Technology - Kharagpur (IIT - Kgp)** have designed '**Physically Unclonable Functions**' (PUF) which are fingerprint generator circuits that can protect **Internet of Things (IoT)** infrastructure from manipulation. The IoTs — for example, doctors remotely monitoring the pacemaker in a patient's heart and modifying its pace — run on a command being sent out from one device to another through a network, and these commands are often unencrypted. This makes electronic devices vulnerable to hacking and manipulations in command.

What

1. The **PUFs consume very less power and are light weight**, hence can be installed in any IoT device.
2. **PUFs are fingerprint generator circuits for electronic objects** which uniquely identify each object, and help in authenticating the commands sent to connected IoT devices.
3. Chakraborty is one of the two main faculty members leading the research efforts associated with the IoT Laboratory of the Computer Science and Engineering (CSE) department.
4. A prototype has already been developed by the team and it is currently being tested on commercially available devices at the IoT Lab.

CARBON DIOXIDE TURNED INTO FUEL USING LIGHT

Scientists have developed tiny **nanoparticles** that help **convert carbon dioxide into methane -a key building block** for many types of fuels – using **only ultraviolet light as an energy source**.

What

1. **Chemists have long sought an efficient, light-driven catalyst** to power this reaction, which could help reduce the growing **levels of carbon dioxide in our atmosphere** by converting it into methane. Not only are the **rhodium nanoparticles** made more efficient when illuminated by light, they have the advantage of strongly favouring the formation of methane rather than an equal mix of methane and undesirable side-products like carbon monoxide.
2. This **strong “selectivity” of the light-driven catalysis** may also extend to other important chemical reactions. The fact that **you can use light to influence a specific reaction pathway is very exciting**.
3. This discovery will really advance the **understanding of catalysis**. Despite being one of the rarest elements on Earth, rhodium plays a surprisingly important role in our everyday lives.

TRAPPIST-1

For the first time ever, astronomers have **discovered seven Earth-size planets orbiting a nearby star** _ and these new worlds could hold life. This **cluster of planets** is less than **40 light-years away in the constellation Aquarius**, according to NASA and the Belgian-led research team who announced the discovery. The planets circle tightly around a dim dwarf star called **Trappist-1**, barely the size of Jupiter. **Three are in the so-called habitable zone**, where liquid water and, possibly life, might exist. The others are right on the doorstep.

What

1. Around a nearby, **cold, small star we found 7 rocky Earth-size planets**, all of which could have liquid water – key to life as we know it.
2. Scientists said they **need to study the atmospheres before determining** whether these rocky, terrestrial planets could support some sort of life. But it already shows just how many Earth-size planets could be out there _ especially in a **star’s sweet spot**, ripe for extraterrestrial life.
3. **There are 200 billion stars in our galaxy**, said co-author Emmanuel Jehin of the University of Liege.
4. **This compact solar system is reminiscent of Jupiter** and its Galilean moons, according to the researchers.
5. The ultracool star at the heart of this system **would shine 200 times dimmer than our sun**, a perpetual twilight as we know it. And the star would glow red _ maybe salmon-colored, the researchers speculate.
6. The spectacle would be beautiful because every now and then, you would see another planet, maybe about as big as twice the moon in the sky, depending on which planet you’re on and which planet you look at.
7. The **Leiden Observatory’s Ignas Snellen**, who was not involved in the study, is excited by the prospect of learning more about what he calls **“the seven sisters of planet Earth.”**

Miscellaneous

UN REPORT ON ACTION FOR GENDER EQUALITY

Making a case for quota for women in elected bodies like Parliament, a UN report said that **reservation in Panchayati Raj Institutions** has helped **reduce gender discrimination**. **More than 110 countries** have some type of quota for women in parliaments and 11 have quotas to increase the gender balance of government agencies, said a UN report on '**Leave no one behind: A call to action for gender equality and women's economic empowerment**'. The report was released in India by Commerce and Industry Minister Nirmala Sitharaman.

What

1. Through the Panchayati Raj Act, **India increased the share of women in local government from five per cent in 1993 to 40 per cent in 2005**, exceeding the mandated quota of 33 per cent.
2. The report's **pitch for the women quota** assumes significance as the issue of women reservation in Parliament has been pending for long.
3. The government has taken host of initiatives like '**Beti Bachao, Beti Padhao**', **Swachh Bharat Abhiyan, Pradhan Mantri Ujjwala Yojana, Mudra** and Stand-Up India for the empowerment of women.
4. The report too stated that legal barriers to women's entrepreneurship are pervasive, especially for married women.
5. The recommendations of the report are consistent with and can strengthen the efforts of the Indian government, businesses and civil society to ensure sustainable job creation.

MECHANISMS ON GENDER KITS: SC

The **Supreme Court** directed companies such as **Google, Yahoo and Microsoft** to set up **mechanisms** to address complaints about content on gender selection kits thrown up by their Internet search engines. Such kits and ads are banned in India and promoting those is an offence.

What

1. A bench comprising **Justices Dipak Misra and R Banumathi** passed the order despite opposition from the companies, which claimed that they would be flooded with complaints and consequential litigation.
2. The **in-house mechanisms** that the companies need to build are in addition to a **nodal agency** that the court in last November ordered the central government to set up to deal with such ads and kits available online.
3. It would also have the **unforeseen side-effect of blocking all other innocuous** or informative information being sought about other subjects involving the same words, they argued.
4. The court turned down their plea that such a sweeping ban would hamper genuine research and also access to any information.

FORMER CJI ALTAMAS KABIR PASSES AWAY

Former Chief Justice of India Altamas Kabir died on 19 February 2017. He was 68-year-old Kabir and was suffering from a kidney ailment and related complications.

What

1. Kabir was appointed as the **Chief Justice of India on September 29, 2012**. He retired on July 19, 2013.
2. Born on July 19, 1948, Kabir was enrolled as an advocate in 1973 and practised in the district court and the Calcutta High Court in Civil and Criminal sides.
3. He was appointed as a permanent judge in the Calcutta High Court on August 6, 1990.
4. Kabir was thereafter appointed as the Chief Justice of Jharkhand High Court on March 1, 2005 and was appointed as a judge of the Supreme Court of India on September 9, 2005.

- Seven years later, **he was appointed as the 39th Chief Justice of India**, a post he held for 292 days.

FIFTH OF WORLD FOOD LOST TO OVEREATING, WASTAGE

Almost 20% of the food made available to consumers worldwide is lost through over-eating or wastage, according to a new study. **The world population consumes around 10% more food** than it needs, while **almost 9% is thrown away** or left to spoil, researchers said. Efforts to reduce the billions of tonnes lost could improve global food security—ensuring everyone has access to a safe, affordable, nutritious diet—and help prevent damage to the environment. Scientists at University of Edinburgh in the UK examined **ten key stages in the global food system** — including food consumption and the growing and harvesting of crops — to quantify the extent of losses.

What

- Using data collected primarily by the UN's Food and Agriculture Organisation**, the team found that more food is lost from the system than was previously thought.
- Almost half of harvested crops — or 2.1 billion tonnes — are lost through over-consumption, consumer waste and inefficiencies in production processes.
- Livestock production is the least efficient process, with **losses of 78% or 840 million tonnes**, the team found. Some 1.08 billion tonnes of harvested crops are used to produce 240 million tonnes of edible animal products including meat, milk and eggs.
- This stage alone accounts for 40% of all losses of harvested crops.
- Increased demand for some foods, particularly meat and dairy products, would decrease the efficiency of the food system and could make it difficult to feed the world's expanding population in sustainable ways.
- Meeting this demand could cause environmental harm by increasing greenhouse gas emissions, depleting water supplies and causing loss of biodiversity. Encouraging people to eat fewer animal products, reduce waste and not exceed their nutritional needs could help to reverse these trends.

NAGALAND NEW CM

Shurhozelie Liezietsu was sworn in as the chief minister of Nagaland by governor P B Acharya. The 81-year-old Liezietsu along with 11 ministers were administered the oath of office and secrecy by Acharya at the Raj Bhavan.

22ND STATE TO JOIN UDAY

The **Government of India and the State of Sikkim** signed a Memorandum of Understanding (MOU) under the Scheme Ujwal DISCOM Assurance Yojana (UDAY), for operational improvement of the State's Power Distribution Department. With the signing of MoU, **the total number of States covered under UDAY has reached twenty-two**. Sikkim would derive an Overall Net Benefit of approximately Rs. 207 crores through UDAY by way of cheaper funds, reduction in AT&C and transmission losses, interventions in energy efficiency, etc. during the period of turnaround.

INTERNATIONAL CONFERENCE ON 'BHARAT BODH'

The President of India inaugurated an international conference on 'Bharat Bodh' (Idea of Bharat) organized by the Indira Gandhi National Open University and Bhartiya Shikshan Mandal on February 23, 2017 in New Delhi. Speaking on the occasion, the President complimented the **Indira Gandhi National Open University (IGNOU)** and the **Bhartiya Shikshan Mandal** for organizing this conference bringing together intellectuals, academicians and researchers to unravel various aspects of the **"Bharat Bodh"** (Idea of Bharat).

INDIA'S RICHEST CITY

India's financial capital Mumbai, which is home to 46,000 millionaires and 28 billionaires, **is the richest Indian city with a total wealth of \$820 billion**, says a report. According to **New World Wealth**, **Mumbai is the richest city in the country followed by**

Delhi and Bengaluru in the second and third place, respectively. Delhi is home to 23,000 millionaires and 18 billionaires with a total wealth of \$450 billion, while Bengaluru with a total wealth of \$320 billion houses 7,700 millionaires and eight billionaires.

What

1. The **list also includes Hyderabad** with a total wealth of \$310 billion. Hyderabad is home to 9,000 millionaires and six billionaires.
2. Kolkata, which is home to 9,600 millionaires and four billionaires, has a total wealth of \$290 billion, followed by Pune (which has a total wealth of \$180 billion, with 4,500 millionaires and five billionaires), Chennai (which has a total wealth of \$150 billion, with 6,600 millionaires and four billionaires) and Gurgaon (which has a total wealth of \$110 billion, with 4,000 millionaires and two billionaires).
3. In Mumbai, localities like Bandra, Juhu, Goregaon, Parel, Worli and Palm Beach Road were named as the richest.
4. In Delhi, it was Westend Greens, Dera Mandi, Greater Kailash and Lutyens.
5. In Kolkata, it was Ballygunge and Alipore, while in Chennai, it was Boat Club Road and Poes Garden.

CHINA IS THE WORLD'S PRINCIPAL IP INFRINGER

Counterfeit goods, software piracy and the theft of trade secrets cost the US economy as high as \$600 billion a year, says a private American watchdog which labelled China as the "**world's principal IP infringer**". The theft of **Intellectual Property (IP)** remains a grave threat to the United States due to lack of legal enforcement and national industrial policies that encourage IP theft by public, quasi-private, and private entities, according to the latest report by the Commission on the Theft of American Intellectual Property.

What

1. It is important to note that **both the low- and high-end figures do not incorporate the full cost of patent infringement-an area sorely in need of greater research.**
2. We have found no evidence that casts doubt on the estimate provided by the Office of the Director of National Intelligence in November 2015 that economic espionage through hacking costs \$400 billion per year.
3. At this rate, the US has suffered over \$1.2 trillion in economic damage since the publication of the **original IP Commission Report in 2013.**
4. On China, the report noted that the Communist giant, whose industrial output now exceeds that of the US, remains the "**world's principal IP infringer**". China is deeply committed to industrial policies that include maximising the acquisition of foreign technology and information, policies that have contributed to greater IP theft.

INDIAN RAILWAYS UNVEILS ANTYODAYA EXPRESS

Indian Railways has unveiled **Antyodaya Express**, a new train for the unreserved passengers. It was unveiled by Union Railway Minister Suresh Prabhu in New Delhi's Safdarjang station. The **first Antyodaya Express is slated to start between Mumbai (Maharashtra) and Tatanagar (Jharkhand)** and second between **Ernakulam and Howrah.**

Key Features of Antyodaya Express

1. The facilities provided in Antyodaya coaches are **similar in first class coaches** in line with purpose of antyodaya which means upliftment of Aam Aadmi (common man).
2. The coaches of train are fully unreserved **LHB (Linke Hofmann Busch)** second class coaches with additional safety features manufactured at the Integral Coach Factory (ICF) in Chennai.
3. The **interior panelling of the coaches has been done** with aluminium composite panels, similar to Deen Dayalu Express introduced in mid-2016.
4. The exterior of the train has been given the colour scheme of red and yellow, with a design around the windows of the coaches and has pleasing interior colour scheme.