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#### 51. The new Governor of Reserve Bank of India:

The new RBI governor is an 'orthodox' macroeconomist'. He believes in rules and technical analysis and pursues predictable and systematic policies. For monetary policy, this means adhering to a steady and predictable strategy for adjusting interest rates in line with the inflation target. Urjit Patel's faith in inflation targeting is well known. In 1999, his Paper on fiscal management and global practices became the basis for the Fiscal Responsibility and Budget Management Act. This has been amended in 2016 to lay down a fiscal deficit target.

Joseph Stiglitz points out, is that "decisions made by the central bank are not just technical decisions; they involve trade-offs and judgements". The global meltdown of 2008 -09, has called into

question the wisdom of mechanical adherence to targets, whether fiscal or monetary. Governor Ranjan had talked about the political dimensions, that together spell liberal democracy. These included the myriad, discrete, independent decisions that make the economy work. Patel is likely to stay focused on the economy and interest rates.

(167 words)

#### 52. Basis of social inequality in India

India's greatest inequality is not in income but in opportunity. To help overcome inequality and poverty, the government must finance or provide public goods that promote equality of opportunity. Every village should have a good school and health centre, electricity, pukka roads, telecom, easy access to safety nets, a good police-judicial system and administrators that quickly redress grievances. That's a much better goal than a cash dole for all.

A small cash dole will be a palliative, but not a cure for the entrenched inequality of opportunity. Switzerland recently held a referendum on a **Universal Basic Income (UBI)** for all citizens. Voters rejected the proposal 77% to 23% because of its prohibitive cost and implicit se of its prohibitive cost and implicit reward for idleness.

(125 words)

#### 53. NAM comprises 120 members and 15 member states:

The organization was founded in Belgrade in 1961, and was largely conceived by India's first prime minister, JL Nehru; Indonesia's first president, Sukarno; Egypt's president, Nasser; Ghana's first president Kwame Nkrumah; and Yugoslavia's president, Josip Broz Tito. India has only once organised the NAM Summit 1983. The last and the 16th edition of the NAM summit was held in Tehran in 2012 and was attended by PM Manmohan Singh. Caracas is now preparing for possible trip by Ansari.

#### 54. Wearing Khadi on Friday in Government offices

Khadi has all the threads of a good yarn, provided it can be reeled off well and sold properly. Participants at the ongoing fashion week in

Mumbai and other ones to follow should take a cue, given the income and employment potential of large scale voluntary adoptions. From meeting the imminent demand for ready to wear khadi to cheap and fast laundry options, the spin-offs are almost endless, connecting rural and urban India in an unbroken thread.

55. **Marshall Plan:** The model of Marshall Plan was simple. Cheap, plentiful financing was provided by countries that had plenty of capacity to produce the things the recipient countries wanted to import, to build up their domestic economic capacity. Exporters found markets, cash strapped importers got financing for their purchases, the imports were used to build up economic capacity and everyone prospered. Why should this model of finding an outlet, via cheap and plentiful financing, for surplus production that gets deployed as valuable economic capacity in countries that desperately need it not get replicated now?
56. **The world's largest river Island Majuli** became **India's first and only island district in India**. The 352 square km island was a subdivision of Jorhat district. With the upgrade, it has become the 35th district of Assam.
57. **ID4D (Identity for Development):** is a cross sector initiative of the World Bank Group with the objective of “making everyone count“ by **providing an identity** and fostering digital identification **for all**.“The initiative looks to **share knowledge and identify good practices across countries** interested in digital identification, recognising **the transformational potential of 21st century ID systems** for the delivery of basic services to the poor.
58. **The NEW HEALTH INDEX :** India ranks an abysmal 143rd among 188 countries in a new health index developed to assess each country's achievement on **health-related sustainable development goals (SDG)**. The SDG index score is based on a scale of zero to 100. An overall score of 42 places India in the bottom quintile, way below China and even war-torn Syria and Iraq. India spends a meagre 1.4% of the GDP on health. The

focus should be on preventive **public health engineering** to dispose of sewage and solid waste, clean drinking water, vector control and vaccination, besides on low-cost healthcare. Better sanitation alone can add an estimated 4% to India's domestic product.

59. **China's stake in Balochistan** : It has invested heavily in the logistical overhaul for exports to Europe and the USA. It involves movement by rail or road from Kashgar in Xinjiang region to the Gwadar port, via Pakistan-occupied parts of Kashmir. Gwadar port is in south Balochistan and therefore, its efforts to gain independence are being suppressed.

60. New Development Bank by BRICS

**Breaking the Monopoly**

<b>BRICS NATIONS</b> <ul style="list-style-type: none"><li>• Brazil</li><li>• Russia</li><li>• India</li><li>• China</li><li>• South Africa</li></ul>	<b>» AIM</b> To challenge western hegemony in the world of finance	<b>» CURRENT SCENE</b> Moody's, Fitch and Standard & Poor's – together account for 90% of the global ratings market
	<b>» REASON</b> To assess economic growth in Asia and in non-western countries	<b>» COMPLAIN</b> Western ratings firms are biased, optimistic on developed nations and pessimistic on the developing ones

**» NEW DEVELOPMENT BANK**

- Headquarter to be based in Shanghai
- NDB Institute will be located in India

**» OTHER PLANS**  
BRICS Railway Research Institute & Agriculture Research Institute may be set up in India

ZAHID

61. GST Council

**A Solid Start to Timely Rollout**  
The GST Council managed to reach consensus on key issues in the first meeting

**EXEMPTION THRESHOLD**  
No GST on turnover up to ₹20 lakh; ₹10 lakh for hill and special states

**JURISDICTION DIVIDED**  
States responsible for assesses up to ₹1.5 cr turnover

**CROSS-EMPOWERMENT**  
To avoid dual oversight of taxpayer with over ₹1.5 cr turnover

**SERVICES**  
To begin with services oversight with the Centre

**COMPENSATION**  
Broad details of compensation to states agreed upon

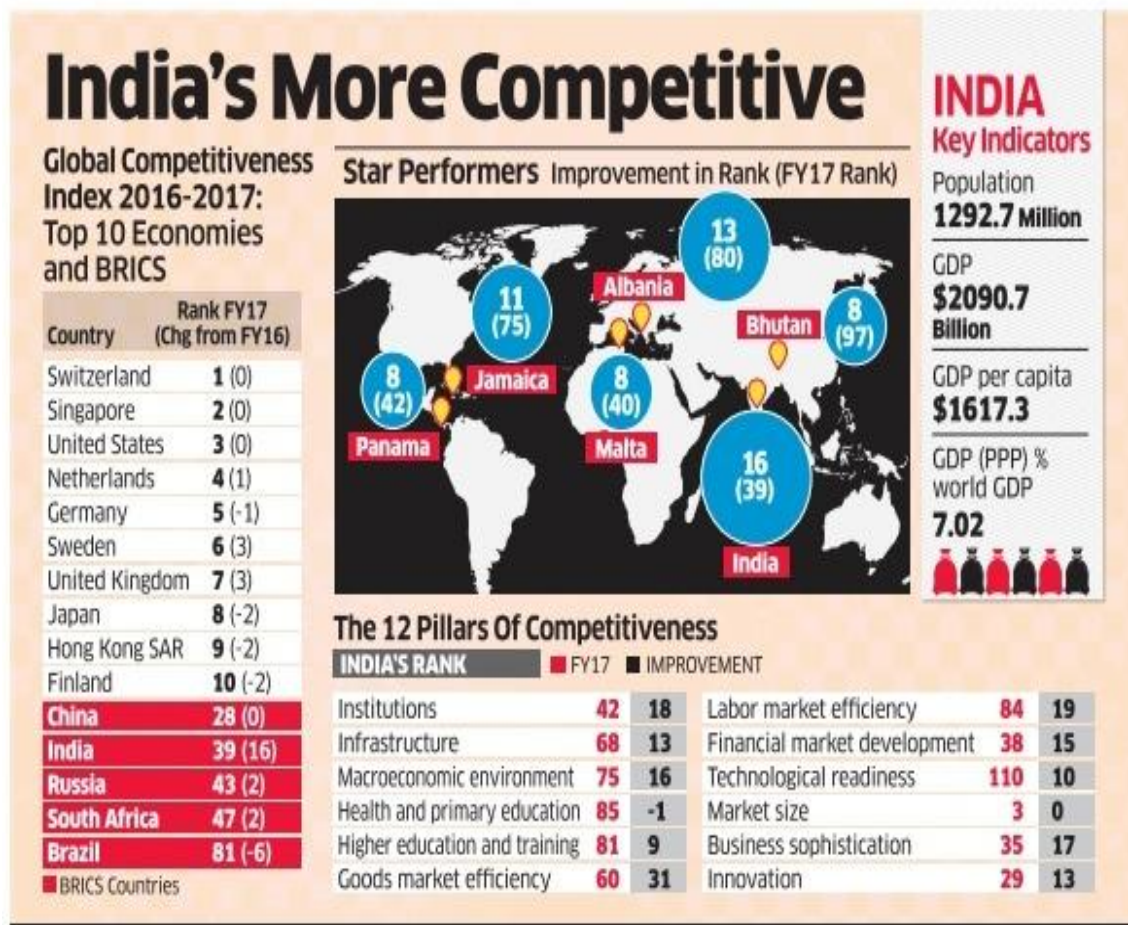
**RATE, SET & GO**  
The decision on GST rate is the next big agenda for the Council  
It will meet on October 17-19 to finalise the rates  
The Centre is keen to fix a low rate to make it acceptable and avoid inflation shock  
Council to decide on the rules on Sep 30

62. India had given asylum to the Dalai Lama, in 1959, on humanitarian grounds, much to China's displeasure. However, India did not and does not support any anti-Chinese political movement in Tibet.

63. **Indus Water Treaty (IWT)** : World Bank brokered the IWT in 1960. , As there is an involvement of the third party it is difficult to abrogate the treaty unilaterally by India. Therefore calls for the abrogation of the 50 year old Indus Water Treaty (IWT) may be irrational given that it could affect water-sharing arrangement with China, Nepal and Bangladesh. India is negotiating other river project treaties with Pakistan taking IWT as the basis.

The Ministry of External Affairs, in the aftermath of the Uri attack stated that IWT cannot be “one sided affair”. Policy makers are not enthusiastic about scrapping the treaty that has stood the test of time, including the wars of 1965, 1971 and the 1999 Kargil standoff besides the Kashmir insurgency since 1990.

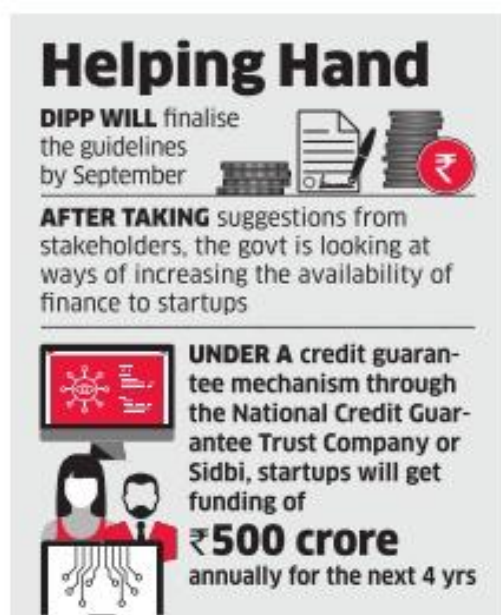
64. India's competitiveness:



65. Schemes for Dalit run Businesses

Credit Enhancement Guarantee Scheme for Scheduled Castes, and the Venture Capital Fund, are the two schemes that were announced in the Budget in July 2014. In two years they have funded 57 entrepreneurs with Rs. 200 crore in 2014-15, and Rs. 12.99 crore Schemes spearheaded by National Scheduled Castes Finance & Development Corporation under the Ministry of Social Justice and Empowerment, reveal a grim picture with most states with high SC population like Uttar Pradesh, not utilising even half the funds earmarked. In 2015-16, 17 of the 25 states could barely use half the funds allocated. Though target of the number of skill development training programmes has been met, but the outcome has not been up to the mark. Guidelines were modified in May to help improve utilisation

66. Micro, Small, and Medium Entrepreneurs



67. **GDP growth** : The provisional data for economic growth in 2015-16 at 7.6%, in line with the advance estimates, has helped India maintain the tag of the fastest-growing economy, surpassing China. GDP is the gross value added plus taxes net of subsidies on goods and services. At current prices, taxes on products grew by 19.4% over the level in 2014-15, while subsidies declined by 5.7%. The outcome was a 27.7% increase in taxes net of subsidies, over the figure for 2014-15, in nominal terms.

However, growth hurdles continue to exist. While consumption continues to grow, investment has been lagging. Gross fixed capital formation has fallen from 30.8% of GDP in 2014-15 to 29.3%. Manufacturing growth, slowed to 9.3% in the fourth quarter from 11.5% in the third quarter. The index of industrial production, which still uses 2004-05 as the base year, is outdated and is to be revised. The slump in oil prices, which helped slash subsidies, and buoyancy in product taxes combined to push up taxes net of subsidy sharply, have given a huge fillip to the GDP growth figure.

#### 68. Withdrawal of Monsoon

Official criteria for declaring monsoon withdrawal include: cessation of rainfall activity over a particular area for continuous five days;



establishment of anticyclone in the lower troposphere and below; and, considerable reduction in moisture content. The wind pattern change to north westerly and moisture levels reduce. Anticyclone is a weather system where air slowly circulates in a clockwise (northern hemisphere) or anti clock wise (southern hemisphere) direction. Anti cyclones are associated with calm weather.

69. **Water shortage in India:** Water management is **primarily a state subject.**

Union government plans to enact a model law for water conservation. It will include river basin management, the allocation, river's economy, river health because dry rivers do not re charge ground water. In the model law, ground water should be given greater importance than surface water, as 85% of drinking water comes from ground water. Development process in the past, **has neglected groundwater** on the assumption that there was plenty of it. The government also plans to amend groundwater rules. These will specify restrictions that come into play. **Drip irrigation** was necessary to curtail demand and the government had to support farmers in this. If farmers are asked to take such a risk of sprinkler, drip irrigation, change in crop pattern, it becomes difficult. Water-management initiatives are to be launched in Maharashtra, Haryana, Gujarat, Rajasthan and Karnataka. In Maharashtra, three quarters of farmland in the western state is un irrigated and rain fed. Nearly 79% of its farmers are small or marginal and eke out a living on parcels of two hectares or less.

70. **NCDEX (National Commodity and Derivatives Exchange):** In 2011 12 Karnataka had set up the Rashtriya e-Market Services Pvt Ltd. Over the past four years, their joint venture has created a United Market Platform (UMP) connecting 105 of Karnataka's 157 APMCs.

What did Karnataka do right? First, it adopted the model APMC Act to bring in **uniformity**; earlier each APMC had its own rules. Second, the **market unification** Third, existing APMCs were roped in **to create liquidity** . Fourth, a **single state-wide trader's licence** was created. Earlier a trader needed a licence for each of Karnataka's 157 mandis. Fifth, **e-permits** now make it easy to move goods within the state and **eliminate harassment** between mandis.

On April 14, 2016 PM launched National Agricultural Market (eNAM ), Modi said farmers must recognise that over-irrigation does not yield better crops . The mission is `per drop, more crop'. eNAM links 21 mandis from eight states. It hopes to go to 200 in five months and 585 by March 2018. That's less than a tenth of existing APMCs. The value of produce traded through the UMP to nearly Rs 12,600 crore in 201516. Volumes transacted have leaped seven-fold. Traders from other states are signing on to the UMP. Government revenue has shot up because there is no leakage; everything is electronic.

71. **Drought management** is a state subject, but in an observation on Tuesday the Supreme Court said that the Central government's responsibility does not end with providing funds. The government has put drought-proofing work by states on mission mode and set a deadline under the National Rural Employment Guarantee programme , to ensure monsoon rainfall is used for water harvesting. A detailed state-wise plan to build farm ponds and vermin composting units has been drawn up for implementation in the current fiscal. The target is to add 877,000 farm ponds and wells, and a million vermin composting farms by the end of this year. In 2013, the government had increased the guaranteed number of days of work under NREGA from 100 days to 150 days.

72. **Pomegranate** is the new symbol of hope for farmers, policymakers and industry alike in water scarce regions. Tribal farmers in Madhya Pradesh and is being promoted in Wardha district of Vidarbha region to alleviate the agrarian crisis. Pomegranate is the only fruit crop to have registered a 29% growth in the area for the past two years. In Maharashtra, the biggest producer and exporter of the fruit in the country, the best quality pomegranates come from the driest regions of the state such as Solapur and the rain shadow regions of Sangli district. Pomegranate is not a traditional crop in Madhya Pradesh, though the state has one of the highest rates of growth of agriculture in the country.

73. **The Irrigation Commission** had identified 67 drought-prone districts, comprising 326 talukas across eight states with an area of 49.73 million hectares. About one-sixth of India, home to about 12% of the country's population, is drought-prone, with the areas that receive rainfall up to 60 cm a year being the most vulnerable. Niti Aayog will prepare location-specific remedial measures for all the identified districts. This will have a more detailed analysis and recommendations than the general drought contingency plan. The plan will list out financial measures that can be undertaken, besides suggesting material support in the form of providing good quality seeds for intermediate crops.

74. **Calculating a Normal Monsoon:** The IMD treats June 1<sup>st</sup> as the normal date for the arrival of the monsoon over the southern coast, based on rainfall data of over 100 years. Central and southern India are expected to get the highest rainfall, at 113% of the long-period average. Rainfall is likely to be 108% of the average in the northwest and 94% in eastern India. Monthly rainfall over the country as a whole is likely to be 107% of the average in July and 104% in August. Both estimates have an error margin of plus minus 9%. Last year, monsoon rain was 14% below

normal, while in 2014 there was a 12% deficit. In 2016 the deficit has been 3% .

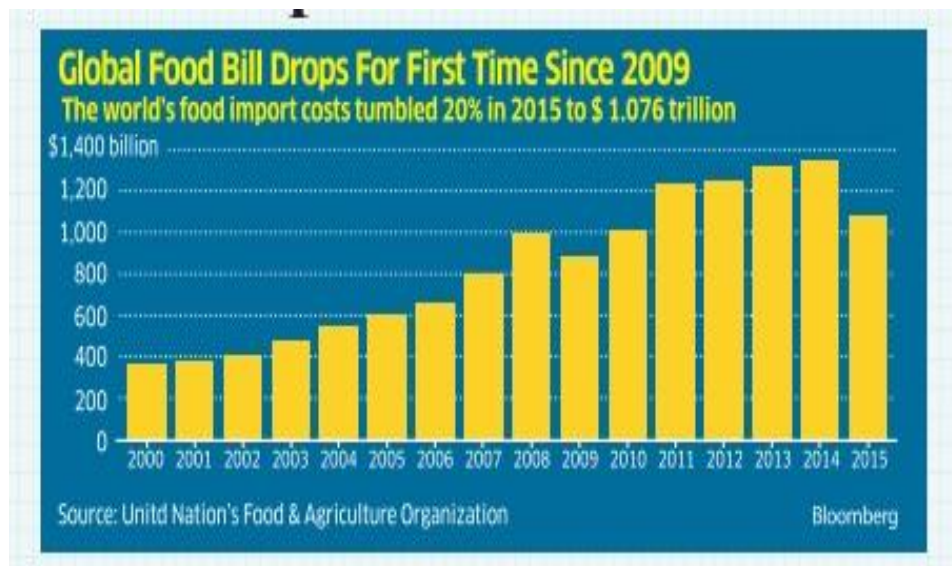
75.**Price Stabilisation Fund:** Price Stabilisation Fund of Rs 750 crore, proposed in Budget of 2015 but created in 2016, is to be used to encourage farmers to grow pulses. **for necessary market interventions to check abnormal increase in prices of key items**, particularly pulses, onions and potatoes, and also to help farmers in case of distress sale of their produce.

**India imports pulses.** USA has competition from other nations. Russia and East Africa. Canada's shipments reached almost \$4.2 billion in 2015. With the implementation of the National Food Security Act in a couple of more states, the requirement for wheat is expected to increase. A target for 2016, is of procuring 30.5 million tonnes wheat from Rabi crop, is an achievable target.

The Ministry Consumer Affairs will manage the Rs 750 crore **price stabilisation fund** from April 2016. The finance ministry has approved **shifting of the fund from the Ministry of Agriculture, to the Ministry of Consumer Affairs.** The Centre has set the target to create a buffer stock of 1.5 lakh tonnes of pulses so that in case of abnormal price rise it can release them in tranches to stabilise prices.

76.**Commission for Agricultural Costs and Prices (CACP)**, a statutory body that advises the government on the pricing policy. The minimum support price (MSP) has been raised to Rs. 3,200 of raw jute by 18.5 % per quintal for 2016-17 in order to boost production.

77.



The world's food bill just fell \$9 billion from a previous estimate as a glut of oil and ships cut transportation costs, adding to an oversupply of everything from grains to sugar, according to the United Nations. Countries around the globe probably spent \$1.076 trillion importing food in 2015, a five-year low, the UN's Food & Agriculture Organization estimated. That's 0.8% less than the agency had forecast in October and marks the first drop since 2009. The cost was 20% less than a record \$1.345 trillion in 2014 as bumper harvests had boost global supplies, helping bring down costs.

78.

### Organic Farming in India

Organic farming is practised in **12 states** in about 4.72 million hectares

Organic food production in 2013-14 was **1.24 million tonnes**

Organic market in India is growing at 25-30%

Organic farming will touch **\$1.36 billion** by 2020

Source: ASSOCHAM & TechSci Research

79. The [Agricultural and Processed Food Products Export Development Authority](#) (Apeda) and the Maharashtra state government started Mangonet, an online system to trace the origin of each fruit to its field.

About 3,500 farmers mostly from Maharashtra registered for the scheme last year and the number has increased to 7,220 this year, with the addition of 2,600 farms from Karnataka and a few from Gujarat and Andhra Pradesh. This enables exporters to comply with EU standards. Between 2004-05 and 2014-15, the value of mango exports, including pulp, increased almost threefold to Rs. 1,144 crore. This was despite a US ban on Indian mangoes from 1989 to 2007 and entry into Australia from 2009.

80. **Bumper Harvest Export of Grapes in 2016** : A container carries 13 tonnes. India's grape exports got off to an early start in 2016, due to the absence of unseasonal rainfall and hailstorms, and have already more than doubled from a year ago. Indian grape exporters dispatched 306 containers as of February 1, compared with 119 containers a year earlier, according to the government's **Agricultural & Processed Food Products Export Development** a bumper production of grapes is also a cause of concern for exporters. Unrestricted exports, especially after March when the harvest is at its peak in India, may bring prices down and reduce profit margins. The availability of Chilean grapes, which are late this year, might clash with India's shipments in March April, adding to pressure on prices.

81. The **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013** , and the **Rules notified in 2015**, allow for the limit of :

- a) Urban land equal to or less than 20 hectares ( 50 acres) and Rural land of 40 hectares ( 100 acres)
- b) Allows no limits for land for application of the Act
- c) Centre's limit cannot be implemented as land is a 'State subject'

## Spelling Out New Rules

**When will the govt pay compensation**

**IF A PRIVATE CO** buys equal to or more than 20 hectares (50 acres) in urban areas & 40 hectares (100 acres) in rural areas

**In case, the land remains unutilised for 5 years...**

<b>IT WILL BE</b> returned to the owner or their legal heirs	<b>THE OWNER</b> will have to return the compensation amount excluding solatium	<b>THE REFUNDED</b> amount will be used for development of culturable wastelands
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**Complex Process**

**A REQUEST FOR** acquisition will have to be sent to the collector

**A PANEL COMPRIS-**ING officers from various depts will survey the area & submit a report to collector

**THE COLLECTOR** will take the final call

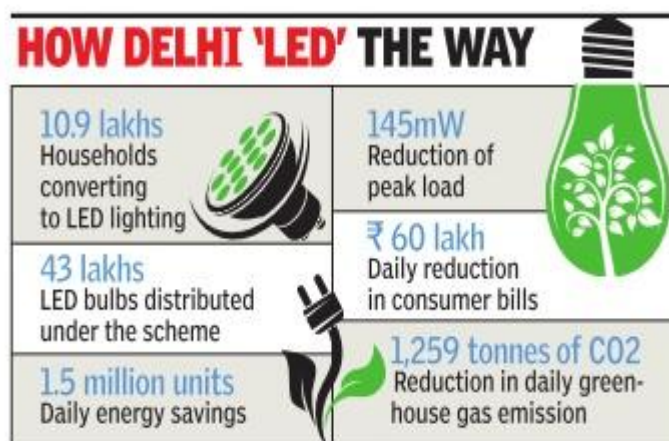


82. The Benami Transactions (Prohibition) Amendment Bill, 2015 was passed by Lok Sabha on July 27 and Rajya Sabha on August 2, 2016. The Benami law complements a law passed earlier to discourage parking of illicit funds overseas. The Benami law provides for rigorous imprisonment of one to seven years for anyone found guilty under it. The offender will also be liable to fine, which may extend to 25% of the fair market value of the property. Any person furnishing false information or document will also be liable for rigorous imprisonment of six months to five years and a fine of up to 10 % of the fair market value of the property.

83. **Prime Minister Crop Insurance Scheme** with a uniform premium to be paid by farmers @1.5% of sum assured for all Rabi crops and 2% for all kharif crops. For annual commercial and horticultural crops, the premium will be only 5%. Unseasonal rains and cyclonic rains across the country will count for post-harvest losses coverage. The scheme comes without any cap on overall premium rate to ensure full claims, which means there is no upper limit on the subsidy the government provides towards balance premium. The government now is aiming for 50% coverage in the next

one year The new scheme improves upon the NDA scheme of 1999 and a subsequent scheme launched by the UPA in 2010 which together had resulted in 23% coverage among farmers.

84. **Cabinet and Cabinet Committee on Economic Affairs (CCEA)** Review by PM of 20 key decisions taken with regard to agriculture and rural development projects based on a presentation made by a group of ministers. These projects include strengthening of Krishi Vigyan Kendras, (b) Shyama Prasad Mukherji Rural Mission (SPMRM) and (c) National Watershed Management Project.
85. **Domestic Efficient Lighting Programme (DELP)** announced by the PM on 5<sup>th</sup> January, 2015, is to replace the less efficient CFL or incandescent lights, with LED bulbs at a discount. This is expected to reduce Delhi's peak load by 145MW and save Rs.61lakh daily in power bill. Energy-saving and green' LED option last year as an alternative to GLS lamps. The former is four times costlier in short duration usages. For longer periods only, it is economical.



86. **Centre for Advanced Computing** : C-DAC, which is the premier R&D organisation of the Department of Electronics and Information Technology , has termed the system `supercomputer in a box', Param Shavak, the system seeks to make **supercomputing accessible for scientific, engineering and academic programmes**. Launched in December 2014, it has been installed at 25 institutes. Param Shavak is available in a single server table top model. The **first** such supercomputer was installed



at the [PSG College of Technology in Coimbatore](#). It aims to provide high performance computing capabilities for engineering and scientific applications to catalyse research using modelling, simulation and data analysis. In 2016 it is to be installed in 50 educational institutions.

87. [What is net neutrality?](#) .Net neutrality has to be defined [as no discrimination in access, speed, costs and content](#). While the first three are in the purview of internet service providers, the last one content is under the platform providers. For layman's understanding, it's like buying units of electricity for your home and then using it for running refrigerators, mixers, bulbs or air coolers. The electricity company does not specify the end usage of the units you purchase, does not discriminate between brands or type of appliances on costs, quality of electricity. The same applies to the internet.

While [the inherent architecture of internet is designed to be neutral](#), in a `mobile-first' country like India, the telecom [internet service providers have discovered the power to discriminate on access, speed and costs](#) using advanced routing technology, for short-term corporate gains, but ignoring long-term consumer benefits. Improved internet access is the backbone of Digital India and is extremely critical for us to enable the market creation for Start up India. The major argument telecom companies make is that they need to get return on their investment on the expensive spectrum they buy.

All technology innovations in the world today are primarily because of [three factors](#) that have come of age: [Moore's law](#), [smaller and cheaper sensors](#), and [big data](#). When the [fourth enabler](#) ubiquitous and reliable [wireless connectivity](#) is ready, the world, in the 21st century , [will witness unprecedented innovation](#)

88. [The Indian Space Research Organisation's \(ISRO\)](#) successful launch of eight satellites into two orbits using a single rocket, Polar Satellite Launch Vehicle, puts India in a unique league of nations. Quietly, India's scientists have scripted a successful story of innovation, technical expertise and

excellence. The Polar Satellite Launch Vehicle has had 37 successful flights, it has launched 121 satellites. India must aim to be more than a major competitor in the multibillion-dollar space market on the back of low-cost innovation. A successful satellite launch requires and brings together different technological innovations and solutions. The focus should be on developing these technological innovations and solutions for commercial applications. ISRO should trigger economy-wide technological innovations and solutions. This calls for increased funding that would allow the space programme to set new goals and challenges. It will require outreach programmes to excite and fire up the imagination, to look at space research as more than just that.

#### 89. UIDAI Rules:

The UIDAI Rules which have been approved include

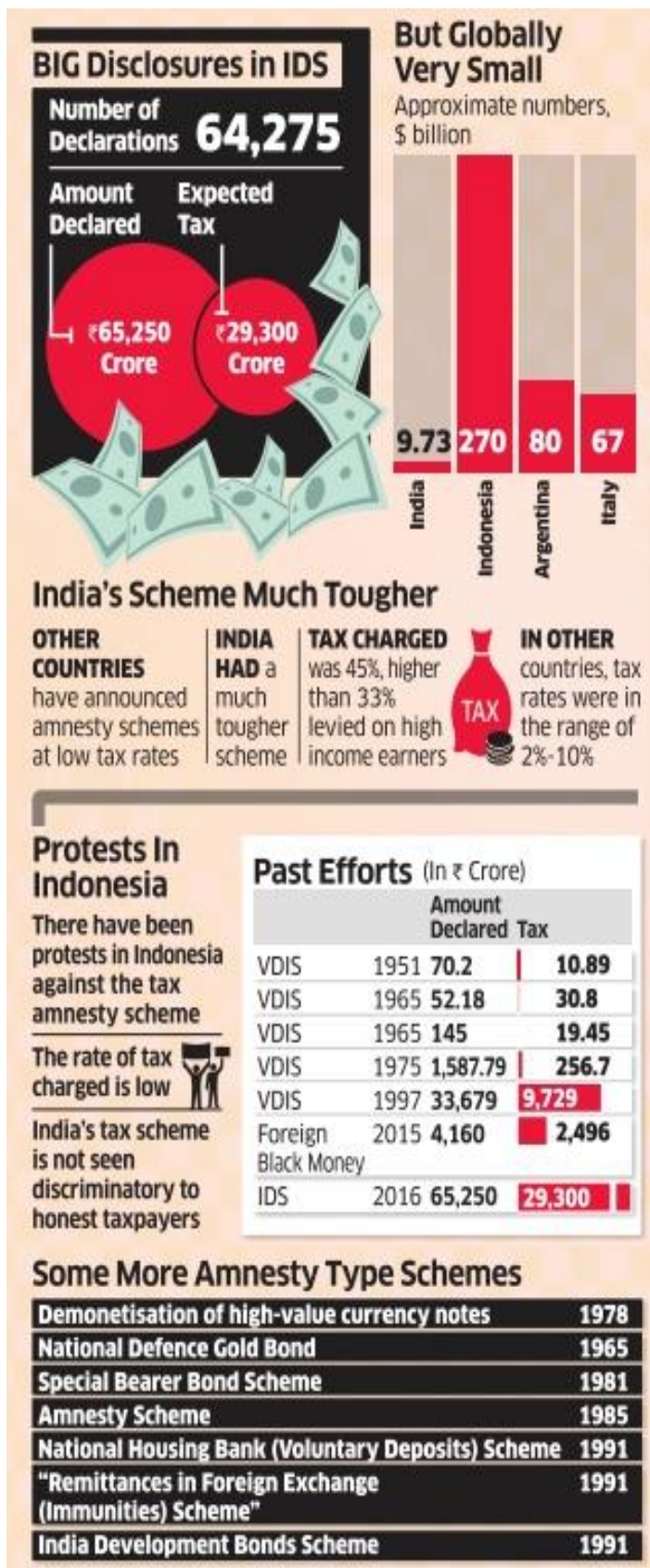
- a) UIDAI (Transaction of Business and Meetings) Regulations, 2016;
- b) Aadhaar (Enrolment and Update) Regulations, 2016;
- c) Aadhaar (Authentication) Regulations, 2016;
- d) Aadhaar (Data Security) Regulations, 2016;
- e) Aadhaar (Sharing of Information) Regulations, 2016.

Approval of the regulations is an important landmark. These regulations contain procedures to ensure that enrolment, authentication, use of Aadhaar, and data and privacy protection are strictly in accordance with the provisions of the Aadhaar Act. People can use Aadhaar to receive various services, benefits and subsidies directly from the government without any intermediaries. It will help governments to ensure targeted delivery of benefits to the deserving individuals and bring transparency and good governance in their systems, UIDAI also stated that so far 105.15 crore

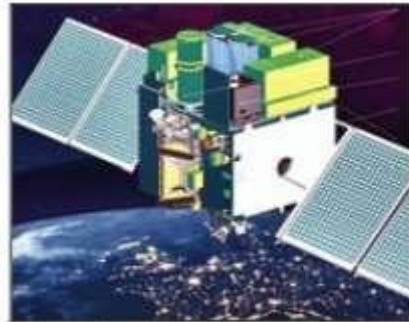
Aadhaars have been generated and around 6 lakh Aadhaar enrolments are being done on a daily basis.

90. **Ujwal Discom Assurance Yojna (UDAY)** has enabled eight out of 16 States to significantly narrow the gap between cost and revenue, reduce unmetered supply and are planning large bond issues in October 2016. Twelve of the 16 states showed reduction in aggregate commercial and technical electricity losses that go unmetered. Provisional data shows that the gap in Uttar Pradesh distribution utilities declined by over 65% to `0.41 per unit for the year ended March 16 against `1.17 per unit as on March last year. The difference between cost of supply of electricity in Haryana reduced by half to `0.23 per unit in March from `0.65 per unit a year ago. Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Goa, Uttarakhand, Rajasthan and Andhra Pradesh are some of the states that showed decline in distribution losses. The 14 parameters on which state distribution companies implementing UDAY are being measured include reduction in technical and commercial losses, reduction in gap between per unit cost of power supply and realisation, household electrification, urban and rural feeder metering, smart metering, profit and loss accounts and the distribution of LED lights.

91. **Income Disclosure Scheme 2016:** has been hailed as a success. See graphic on next page



92. [India's first space observatory](#) was put into orbit on 28<sup>th</sup> September, 2015. Inter-University Centre For Astronomy and Astrophysics (IUCCA) in Pune. "The scientists there have shown an interest as they have scheduled a conference on Astrosat," he said. IUCCA has a major role in the Astrosat mission as well.



Astrosat is India's first space observatory

93. [67<sup>th</sup> Republic Day, 2016](#) : The President of France was the Chief Guest. Some of the weapons on display included Akash weapon system, the Mobile Autonomous Launcher of the BrahMos Missile System, the T-90 Bhishma tank, the Infantry Combat Vehicle BMP II and the Integrated Communication Electronic Warfare System. IAF transport fleet that performed a crucial role in relief operations this year: the C-17, the C-130 and the MI-17V5 The 35th Infantry French contingent marched alongside Indian troops for the first time in the history of the parade. The Army floated [two tableaux](#) this time, one especially for ex-servicemen to highlight the efforts of the veterans in supporting the larger armed forces community.

94. [Gravity makes waves in `discovery of the century'](#)

[What are gravitational waves and why were they in news in 2016?](#)

A team of physicists announced that they had [heard and recorded the sound of two black holes colliding a billion light-years away](#), a fleeting chirp that fulfilled the last prophecy of Einstein's general theory of relativity.

That faint rising tone, physicists say, is [the first direct evidence of gravitational waves](#), the ripples in the fabric of space and time Einstein had predicted a century ago.

And it is a ringing confirmation of the nature of black holes, the bottomless gravitational pits from which not even light can escape. If replicated, that simple chirp now seems destined to take its place among the great sound bites of science, ranking with Alexander Graham Bell's "Mr Watson -come here".

Modified from news item in ET (Delhi) by Dennis Overbye

NYT NEWS SERVICE

95. India to become a member country of [International Energy Agency - Ocean Energy Systems \(IEA-OES\)](#). This will give access to advanced R&D teams and technologies across the world and help tap ocean renewable energy resources.

Earth System Science Organisation, National Institute of Ocean Technology is under the Ministry of Earth Sciences. It will help in advance research, development and demonstration of technologies to harness energy from all forms of ocean renewable resources, as well as for other uses, such as desalination through "international cooperation and information exchange.

96. [Nuclear Non-proliferation Treaty](#) As in October, 2015, estimated Nuclear Weapon Inventories, officially recognised under [Nuclear Non-proliferation Treaty](#) include:

- a) Russia with 7,770 inventories
- b) USA with 7,100
- c) France with 300
- d) China with 260
- e) UK with 225

#### [Non-NPT Nuclear weapon States](#)

- a) India with 120
- b) Pakistan with 120

- c) Israel with 80
- d) North Korea with 8

**The number of years taken from testing to weapon**

- a) USA simultaneously, both within 2 years
- b) USSR, France, and Britain developed weapons within one year of testing a nuclear device that was developed in about 6 to 7 years
- c) China tested device in ten years, and developed weapons within six months
- d) Israel weapons within six months of testing ability that took eleven and a half years
- e) India Tested the device in 10 years and developed weapon 20 years thereafter.
- f) Pakistan tested in 11 years and developed weapons 12 years thereafter.

97. India continues to remain the **world's largest arms importer**, accounting for 14% of the global imports in the 2011-2015 timeframe. Indicative of the country's continued failure to build a strong domestic defence-industrial base (DIB). A global think-tank, **Stockholm International Peace Research Institute (SIPRI)**, also shows India's arms imports remain **three times greater than those of its rivals China and Pakistan**. Its biggest suppliers are **Russia, the US, Israel and France**.

1. India, at 14%
2. China 4.7%,
3. Australia (3.6%),
4. Pakistan (3.3%),
5. Vietnam (2.9%)
6. South Korea (2.6%).

**Exports of defence technology :**

1. USA
2. Russia : supplies 59% to China
3. China : 35% to Pakistan; 20% Bangladesh; 16% .

4. China imports 59% from Russia, 15% from France, 14% from Ukraine

#### 98. The International Solar Alliance Secretariat in Gurgaon

The Modi government is investing an initial \$30m in setting up the 120-country-solar alliance's headquarters in India. The eventual goal is to raise \$400m from membership fees, and international agencies. Companies involved in the project include Areva, Engie, Enel, HSBC France and Tata Steel.

Areva is also setting up a nuclear power plant in Jaitapur, after France became the first country to conclude a civil nuclear deal with India following a Group in September 2008. India and Paris working to expand partnership in areas of smart cities, solar energy, counter-terrorism, rail infrastructure and space

99. **Chandigarh** (designed by Swiss French architect Le Corbusier) as **one of the 3 cities chosen by France** to make them smart. The collaboration include working together on feasibility studies, building capacities at national, region and local levels, organising workshops trainings, forging business-to-business partnerships and implementing any other projects mutually determined. "France is ready to implement its best technological solutions and share its experience in the field of integrated sustainable cities, in particular in urban planning, urban grids, water and sanitation, sustainable mobility and digital technologies.

100. **Drones** The government's plan to legalise the use of drones after it is regulated either by the state governments or the police. The unmanned aerial vehicles are seen as a threat to security and privacy. The International Civil Aviation Organisation does not have any standards for their operations.

All commercial aerial vehicles including unmanned aerial vehicles should logically come under DGCA's jurisdiction. The operator will have



to maintain the video in its archive just like companies do with financial records for tax authorities. There will be no fly zones. If the drone enters that area, it will be tracked, maybe destroyed and the operator prosecuted.

