HYPERLOOP

JULY 2018

CURRENT AFFAIRS FOR ESE 2019

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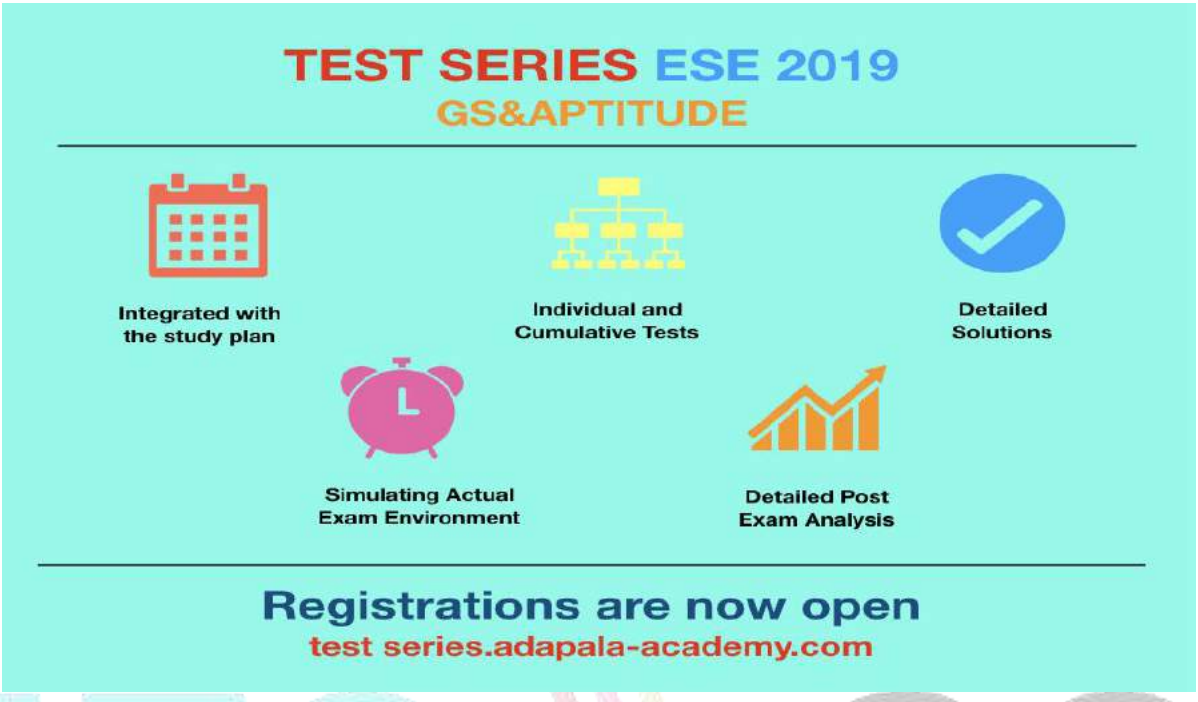
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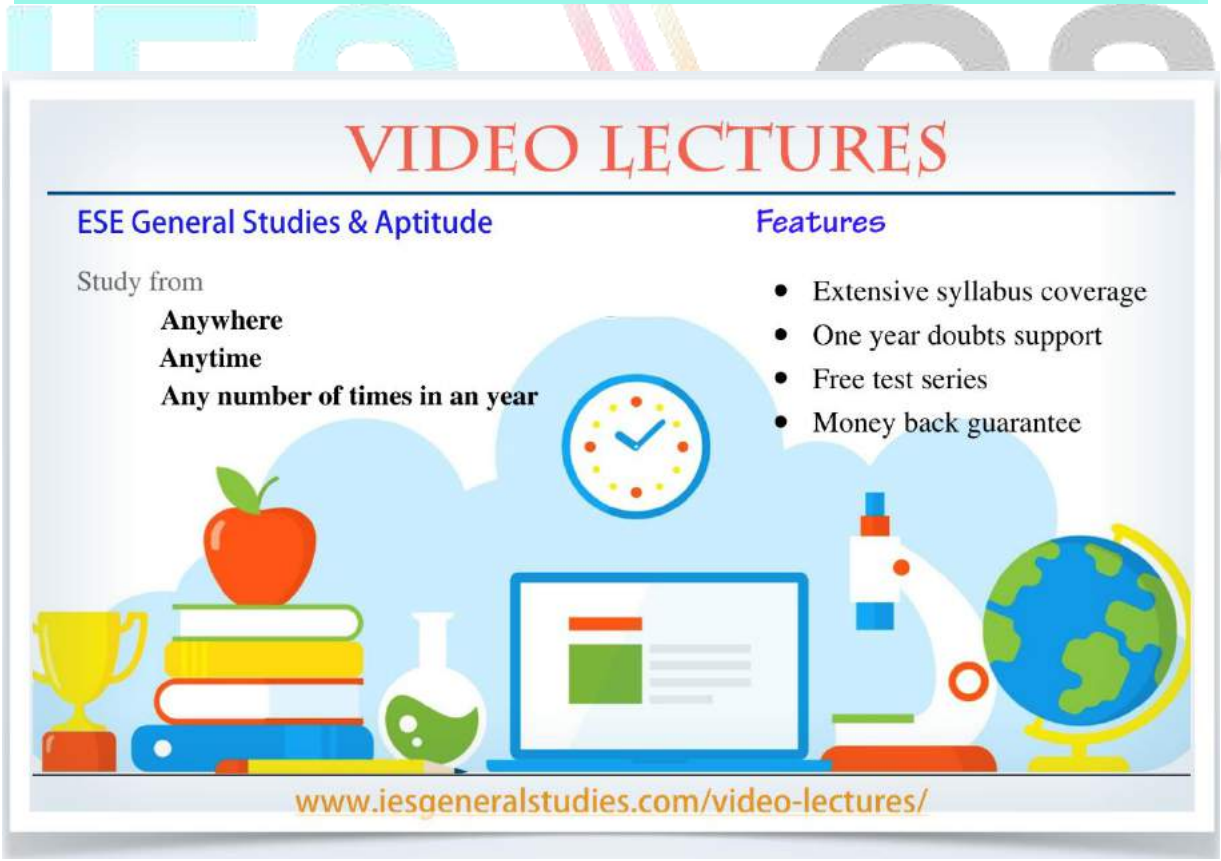
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1. NATIONAL AND INTERNATIONAL ISSUES

1.1 ECONOMIC DEVELOPMENT

FDI Growth Record

Foreign direct investment (FDI) in India is recording a five-year low according to the latest data of the Department of Industrial Policy and Promotion (DIPP)

- The United Nations Conference on Trade and Development(UNCTAD) report shows that FDI in India decreased to $40 billion in 2017 from $44 billion in 2016
- Whereas outflows from India has more than doubled to $11 billion.

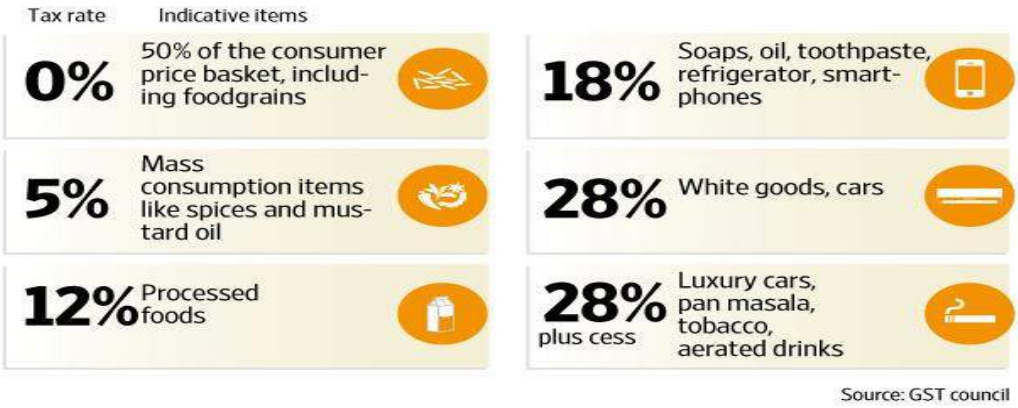
FDI:

- Foreign direct investment (FDI) is an investment made by a firm or individual in one country into business interests located in another country.
- FDI takes place when an investor establishes foreign business operations or acquires foreign business assets

Goods and Services Tax (GST)

The Goods and Service Tax (GST) has completed one year of its implementation.

- It is a destination-based tax as it is applied on goods and services at the place where final/actual consumption happens
- GST is applied to all goods other than crude petroleum, motor spirit, diesel, aviation turbine fuel and natural gas and alcohol for human consumption
- There are four slabs for taxes for both goods and services- 5%, 12%, 18% and 28%.



- Dual GST model
    - Central GST (CGST) levied by Centre
    - State GST (SGST) levied by State
    - Integrated GST (IGST) –levied by Central Government on inter-State supply of goods and services.
    - UTGST – Union territory GST, collected by union territory government

The Goods and Services Tax (GST) Council:

- GST Council is the governing body of GST having 33 members.
- It is chaired by the Union Finance Minister

GST anti-profiteering authority

- To ensure that consumers get the benefit of tax rate reduction post the roll out of Goods and Services Tax (GST).
- It is responsible for applying anti-profiteering measures in event of reduction GST rate on supply of goods or services or if benefit of input tax credit is not passed on to recipients by way of commensurate reduction in prices.

Proposed Benefits of GST

Decrease in Inflation due to

- Reduction in Cascading effect of Taxes
- Overall Reduction in Prices

Ease of Doing Business due to

- Common National Market
- Benefits to Small Taxpayers

Decrease in "Black" Transactions due to

- Self-Regulating on line Tax System
- Non-Intrusive and transparent Tax System

More informed consumer due to

- Simplified Tax Regime
- Reduction in Multiplicity of Taxes

Poorer States to gain due to

- GST being a destination-based Tax
- Consumer States to benefit the most
- Abolition of CST

Make in India boost due to

- Exports to be Zero Rated
- Protection of Domestic Industry through IGST

Scheme of Recapitalization of Regional Rural Banks

To enable the RRBs to maintain the minimum prescribed Capital to Risk Weighted Assets Ratio (CRAR).

Regional Rural Banks:

- RRBs were set up with the objective to provide credit and other facilities, especially to the small and marginal farmers, agricultural laborer, artisans and small entrepreneurs in rural areas
- RRBs are jointly owned by Government of India, the concerned State Government and Sponsor Banks.

Capital to Risk Weighted Assets Ratio:

- Is also known as Capital Adequacy Ratio (CAR)
- Banks available capital expressed as a percentage of a bank's risk-weighted credit exposures.
- Risk-weighted assets weighted according to the risk of the asset.
- The assets are that accounts that make money for the bank such as equipment and land; loans, including interest from consumer and business loans; reserves, or holdings of deposits of the central bank and vault cash; and investments, or securities etc.

Consolidation of Regional Rural Banks (RRBs)

The roadmap has been prepared in consultation with NABARD.

- To minimize their overhead expenses

- Optimize the use of technology
- Enhance the capital base and area of operation
- Increase their exposure

CSC as Banking Correspondents

CSC SPV has entered into agreement with HDFC Bank to enable the Village Level Entrepreneurs (VLEs) as Banking Correspondents of HDFC Bank.

- CSC SPV is a Special Purpose Vehicle under the Ministry of Electronics & IT
- VLEs are those who are managing the Common Services Centers
- VLEs as Banking Correspondents will make banking services more accessible in rural areas
- Will assist to promote financial inclusion
- It would help in Government's Direct Benefit Transfer (DBT) of various schemes.
- It will facilitate withdrawal and deposit of government entitlements such as payments under MGNREGA, social welfare schemes like widow pension, handicapped and old age pension, etc.

Common Service Center:

- The Common Service Center (CSC) Scheme is an integral part of "Digital India" initiative
- They facilities for delivering Government of India e-Services to rural and remote locations.
- They are also enablers of community participation and collective action.
- CSCs enable the three vision areas of the Digital India programme:

a) Digital infrastructure as Utility to Every Citizen
b) Governance and services on demand
c) Digital empowerment of citizens

Andhra Pradesh tops the list in ease of doing business

For second year in a row, Andhra Pradesh has topped the list in ease of doing business among all states and UTs. Andhra Pradesh is followed by Telangana and Haryana. The states have been divided into: Top Achievers, Achievers, Fast Movers and Aspirers.

The list of top 5 states

1. Andhra Pradesh

2. Telangana

3. Haryana

4. Jharkhand

5. Gujarat

About the Ranking

- This is the third edition of the rankings
- Conducted by DIPP(Department of Industrial Policy & Promotion) in collaboration with the World Bank
- Done annually under the Business Reform Action Plan (BRAP)
- The parameters include areas such as construction permit, labour regulation, environmental registration, access to information, land availability, and single window system.
- Improvement in ease of doing business will help attract more investment and better business climate for investors.

Anti dumping duty and safeguard duty

India has imposed anti-dumping duty on a Chinese polyester yarn used in automobile and other industries.

Anti dumping Duty

- Countries carry out anti-dumping probe to determine whether their domestic industries have been hurt because of a surge in below-cost imports.
- As a countermeasure, they impose duties called antidumping duties on the imports
- Anti-dumping Duty is allowed under the WTO norms

Safeguard duty on solar cells

The Directorate General of Trade Restrictions (DGTR), the DGTR approved the safeguard duty on solar panels and modules.

- Safeguard duty is a restraint on international trade or economic development
- It is to protect communities from development aggression or home industries from foreign competition by the respective countries.

Index of Industrial Production

- The Index of Industrial Production (IIP) is an index which shows the growth rates in different industry groups of the economy in a stipulated period of time.
- The IIP index is computed and published by the Central Statistical Organisation (CSO) on a monthly basis.

Classification:

1) Sectoral classification:
   - Industrial production for the purpose of IIP is divided into three sectors, i.e, Mining, Manufacturing and Electricity.
   - The relative weights of Manufacturing, Mining and Electricity are 75.5%, 14.2% and 10.3% respectively.
2) Use-based classification:

   - Use based like basic goods, capital goods, intermediate goods, consumer durables and consumer nondurables.
   - The relative weights of Basic Goods, Capital Goods, intermediate goods and Consumer Goods are 45.68%, 8.83%, 15.68 and 29.81% respectively.

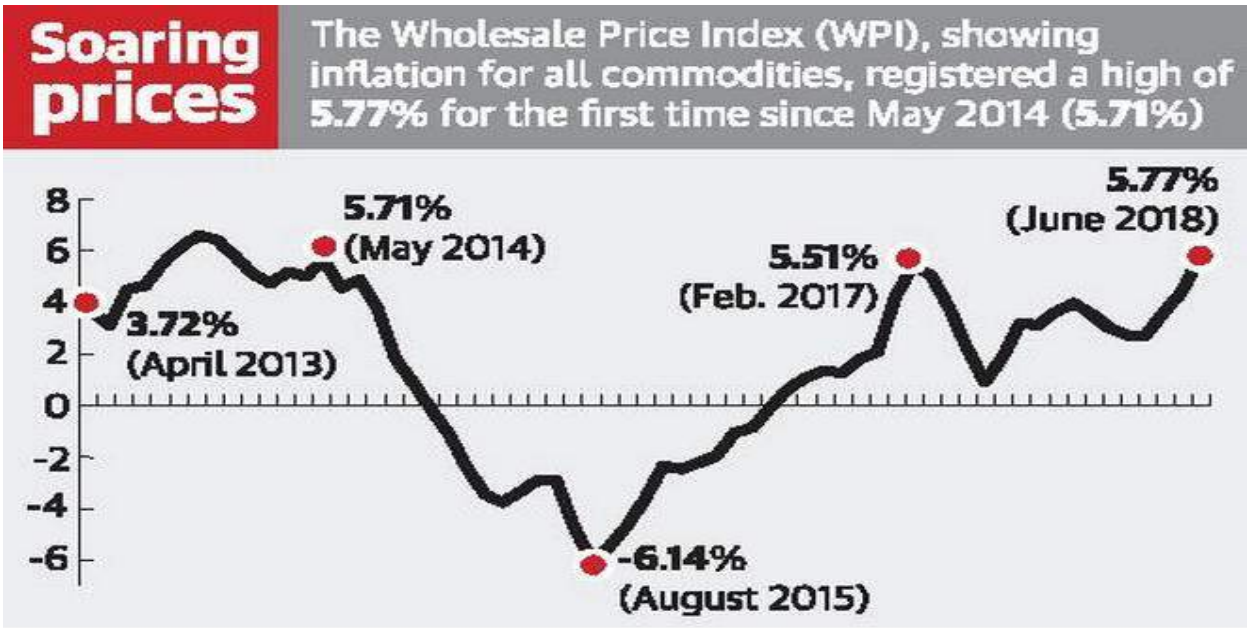
Financial Resolution and Deposit Insurance Bill

- The Bill establishes a Resolution Corporation to monitor financial firms, anticipate risk of failure, take corrective action, and resolve them in case of such failure.
- The Resolution Corporation will take over the management of a financial firm once it is classified as 'critical'
- Resolution may be undertaken using methods including:

1) Merger or acquisition
2) Transferring the assets, liabilities and management to a temporary firm, or
3) Liquidation

Rising Inflation

Inflation at the wholesale level raised to 5.77% in June, the highest since December 2013.



Key facts:

- The wholesale price index is an index that measures and tracks the changes in the price of goods in the stages before the retail level.

Reasons:

- Rising fuel prices
- The announcement of kharif minimum support price (MSP)

Inflation:

Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling.

GDP deflator

- The GDP deflator, is a measure of inflation.
- It is the ratio of the value of goods and services an economy produces in a particular year at current prices to that of prices that prevailed during the base year.
- This ratio helps show the extent to which the increase in gross domestic product has happened on account of higher prices rather than increase in output.
- GDP price deflator = (nominal GDP ÷ real GDP) x 100

National Waterways

111 inland waterways (including 5 existing) have been declared as 'National Waterways' (NWs) under the National Waterways Act, 2016.

Operational Waterways

- NW-1 (River Ganga)
- NW-2 (River Brahmaputra)
- NW-3 (West Coast Canal from Kottapuram to Kollam along with Udyogmandal and Champakara Canals)
- NW-16 (River Barak)
- NW-27, 68 and 111 (in Goa)
- NW-9 (in Kerala) and
- NW-97

Jal Marg Vikas Project (JMVP)

Government is implementing the Jal Marg Vikas Project (JMVP) for capacity augmentation of navigation on the Haldia – Varanasi stretch of NW-1(River Ganga)with the technical and financial assistance of the World Bank.

Projects in the North East

20 National Waterways out of 111 are in North Eastern Region (NER).

- NW-2 (river Brahmaputra) from Dhubri to Sadiya (891 km) is operational
- NW-16 is on river Barak

1.2 INDUSTRIAL DEVELOPMENT

Domestic Council for Gold

The Centre has decided to set up a Domestic Council for Gold to aid exports of jewellery.

- The council will represent all the jewellers of India
- The council would work towards industry development, job creation, building of regional clusters and strengthening of value chains.
- India's exports in 2017-18 were the highest in six years

Amendments to Intellectual Property rules

- To revoke the power vested with Customs authorities to seize imported products based on complaints of patent infringement.
- To oblige the IP right-holder to notify the Commissioner of Customs of any amendment, cancellation, suspension or reaction that concern Intellectual Property rights.

About intellectual property rights:

- Intellectual property rights refer to a collection of rights that includes copyright, patents
- They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.

WIPO Copyright Treaty and WIPO Performance and Phonograms Treaty

The Union Cabinet decided to give accession to the WIPO Copyright Treaty and WIPO Performers and Phonograms Treaty

WIPO Copyright Treaty:

- Is a Special agreement under Berne Convention (for protection of literary and artistic works).
- It has provisions to extend the protection of copyrights contained therein to the digital environment.

WIPO Performances and Phonograms Treaty:

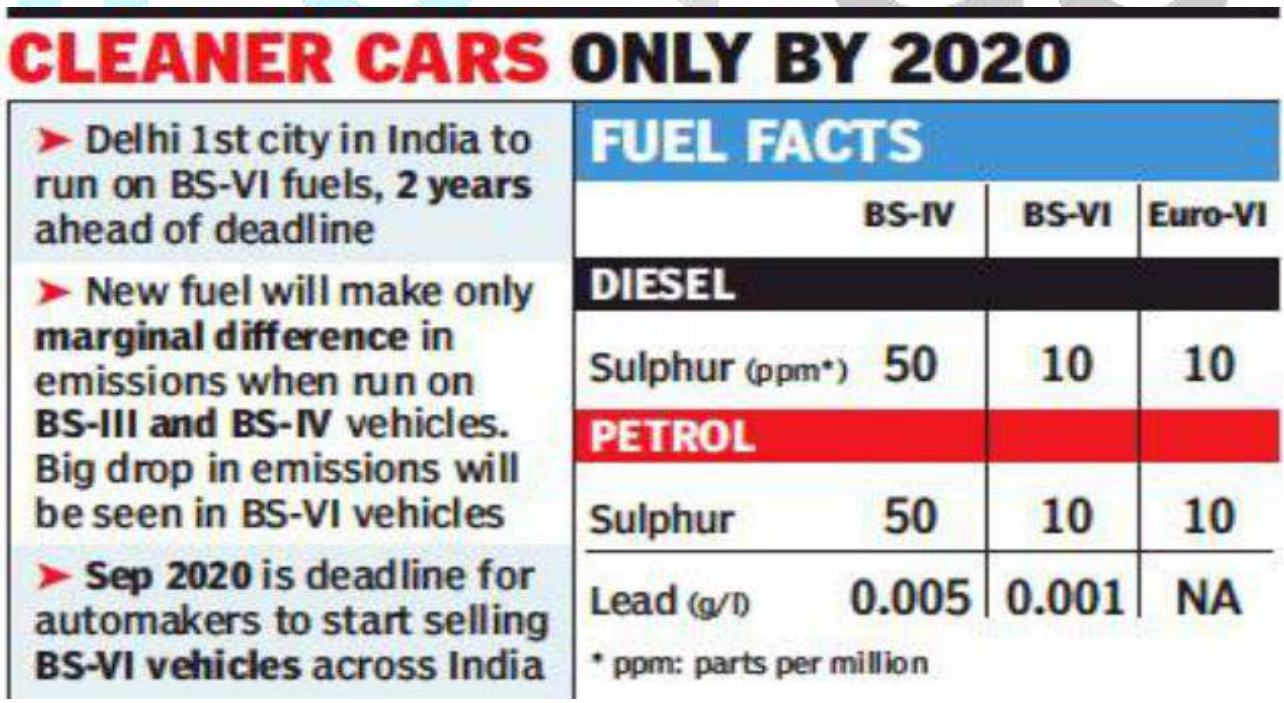
- WPPT deals with rights of two kinds of beneficiaries, particularly in digital environment - (i) Performers (actors, singers, musicians etc.) (ii) Producers of Phonograms (Sound recordings).
- The treaty empowers right owners in their negotiations with new digital platforms and distributors.
- It recognizes moral rights of the performers for the first time & provides exclusive economic rights to them.

ICAT releases First BS-VI engine certificate

- ICAT has completed the first BS-VI certification for a heavyduty engine model
- ICAT is established under the National Automotive Testing and R&D Infrastructure Project (NATRiP)

BS-VI:

- Bharat stage emission standards (BSES) are emission standards to regulate air pollutants from internal combustion engines and Spark-ignition engines equipment, including motor vehicles.
- The more stringent limits on the gaseous emission components and the particulate matter (PM) limits.



CLEANER CARS ONLY BY 2020

- Delhi 1st city in India to run on BS-VI fuels, 2 years ahead of deadline
- New fuel will make only **marginal difference** in emissions when run on **BS-III and BS-IV** vehicles. Big drop in emissions will be seen in BS-VI vehicles
- **Sep 2020** is deadline for automakers to start selling **BS-VI vehicles** across India

FUEL FACTS

	BS-IV	BS-VI	Euro-VI
DIESEL			
Sulphur (ppm*)	50	10	10
PETROL			
Sulphur	50	10	10
Lead (g/l)	0.005	0.001	NA

* ppm: parts per million

Zero-budget natural farming

- ZBNF is set of natural farming methods where cost of growing and harvesting plants is zero.
- It is different from organic farming
- The inputs used for seed treatments and other inoculations are locally available in form of cow dung and cow urine.
- The main aim of ZBNF is eliminate use of chemical pesticides and uses biological pesticides and promote of good agronomic practices.
- It also protects soil from degradation and helps in retaining soil fertility and is climate change resilient.

Google to mentor local AI start-ups

Google announced a 'Launchpad Accelerator India,' a mentorship program that would aim to support Indian start-ups that deploy artificial intelligence and machine learning to build solutions for local needs.

- The three-month accelerator
- It will provide 8-10 Indian start-ups with mentorship and access to the best of Google — its people, network and technologies.

Western Ghats bags fourth best tourist spot

Lonely Planet's list, a collection of 10 of the best destinations to visit in the continent for the year. Neelakurinji (Strobilanthes kunthiana), which has started blooming after 12 years in the hill station of Munnar has found mention in report.

About Western Ghats

- Older than the Himalayas
- Rich and unique flora and fauna
- One of the Hottest Biodiversity Hotspots
- An UNESCO World Heritage site
- Traverses Tamil Nadu, Kerala, Karnataka, Goa, Maharashtra and Gujarat

Amendments Proposed to Central Motor Vehicles Rules

- The FASTags and Vehicle Tracking System device mandatory for all commercial vehicles obtaining national permit.
- Stipulates other additional conditions for obtaining national permit.
- The body of a tanker carrying dangerous or hazardous goods has to be painted in white colour and display the prescribed class label on both the sides and rear of the tanker.

FASTag

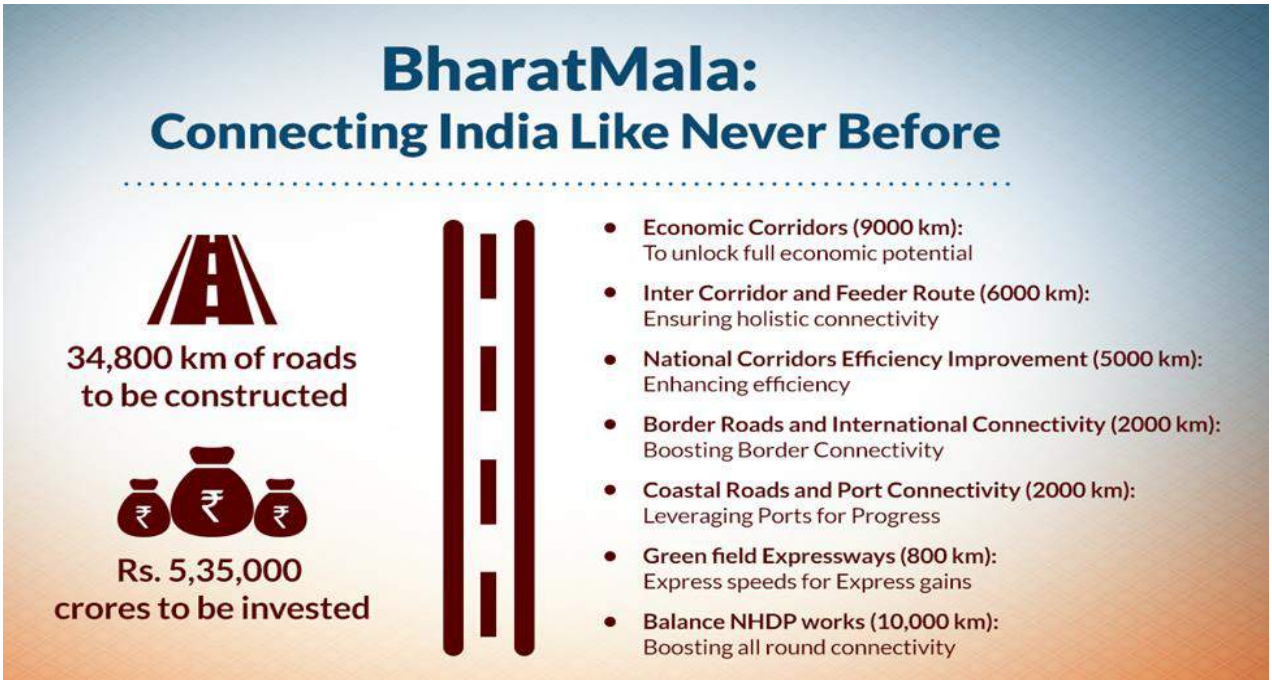
- FASTag is an electronic toll collection system in India, operated by the National Highway Authority of India (NHAI).
- It employs Radio Frequency Identification (RFID) technology for making toll payments directly from the prepaid or savings account linked to it.
- It is affixed on the windscreen of the vehicle

Vehicle tracking system

- A vehicle tracking system combines the use of automatic vehicle location in individual vehicles with software that collects these fleet data for a comprehensive picture of vehicle locations.
- Modern vehicle tracking systems commonly use GPS or GLONASS technology for locating the vehicle

Bharatmala Pariyojana

Bharatmala Pariyojana is a centrally-sponsored and funded road and highways project of the Government of India.



- The umbrella programme will subsume all existing highway projects including the flagship National Highways Development Project (NHDP)
- Under programme, roads will be built along borders with Bhutan and Nepal, bottlenecks on existing Golden Quadrilateral highway network will be removed
- The road connectivity to small industries will be ensured and manufacturing centres will be connected with national highways.

Reconstitution of National Bamboo Mission

The restructured National Bamboo Mission (NBM) has been launched under the National Mission for Sustainable Agriculture (NMSA).

Objectives:

- To increase the area under bamboo plantation in non-forest Government and private lands.
- To supplement farm income
- Meet the quality raw material requirement of industries.
- To improve post-harvest management through establishment of innovative primary processing units
- To promote product development.
- To promote skill development, capacity building, awareness generation.

Farmers win national honour for innovation

The Jagjivan Ram Innovative Farmer Awards, 2017 is instituted by the ICAR (Indian Council of Agricultural Research).

This year the award is given to two farmers:

1. For innovative integrated farming.
2. Implementation of several innovative techniques such as open precision farming in horticultural crops and the System of Rice Intensification (SRI) in rice and effective crop rotation.

System of Rice Intensification (SRI):

- It is a methodology aimed at increasing the yield of rice produced in farming.
- It is a low water, labor-intensive, method that uses younger seedlings singly spaced and typically hand weeded with special tools

Watershed development projects

Watershed management is an attempt to halt land degradation and a holistic process for getting maximum production out of land.

- It implies rational utilisation of land and water resources.
- The rain water can be made to move down the slopes slowly, ensuring optimum infiltration and percolation, automatically solving the problem of soil erosion.

- To facilitate water conservation and recharge, and to prevent soil degradation

National e-commerce regulator

A national regulator for e-commerce is proposed in the upcoming legislation governing all aspects of electronic commerce in the country.

Functions:

- The regulator will ensure consumer protection and compliance with foreign investment caps in e-commerce.
- To effectively respond to a proposal for multilateral discipline in e-commerce at the World Trade Organization (WTO).
- To follow inventory-based models for selling locally produced goods through an online platform.

Benefits:

- Ensures growth of e-commerce
- It helps private sector companies comply with the norms laid down by the Srikrishna committee on data localization.
- Dispute resolution at World Trade Organization (WTO)
- Helps domestic industry
- Encourage micro, small and medium enterprises
- Encourage FDI in e-commerce

1.3 SOCIAL DEVELOPMENT

EC launches Braille-enabled Voter IDs

- To ensure greater participation of persons with visual impairment in the electoral process.
- The Commission unveiled a strategic framework on “Accessible Elections”.
- Accessible communication awareness materials, a mobile phone application to motivate and educate the voters

Braille technology

- Braille technology is assistive technology which allows blind or visually impaired people to do common tasks such as writing, browsing the Internet etc.

The DNA Technology Regulation Bill 2018

The Union Cabinet chaired by Prime Minister has approved The DNA Technology (Use and Application) Regulation Bill 2018.

Purpose:

- For expanding the application of DNA-based forensic technologies to support and strengthen the justice delivery system of the country.
- The utility of DNA based technologies for solving crimes, and to identify missing persons.
- To ensure DNA test results are reliable and the data remain protected from misuse or abuse.
- Speedier justice delivery.
- Increased conviction rate.

National Health Stack

NITI Aayog has proposed creation of National Health Stack (NHS), a centralized health record for all citizens of the country.

Highlights

- To streamline the health information and facilitate effective management of the same.
- To address the challenge and seeks to employ latest technology including Big Data Analytics and Machine Learning Artificial Intelligence
- To create a unified health identity of citizens across levels of care, i.e. Primary, Secondary and Tertiary and also across Public and Private.
- To bring down the costs of health protection

Ayushman Bharat - National Health Protection Scheme (AB-NHPS)

- The scheme has the benefit cover of Rs. 5 lakh per family per year.
- The target beneficiaries of the proposed scheme will be families belonging to poor and vulnerable population based on SECC database.

- AB-NHPM will subsume the on-going centrally sponsored schemes - RashtriyaSwasthyaBimaYojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS),
- It covers both prevention and health promotion.
- Two flagship programmes under Ayushman Bharat programme are Health and Wellness Centre and National Health Protection Scheme

Why Ayushman Bharat?

- In-patient hospitalization expenditure in India has increased nearly 300% during last ten years. (NSSO 2015).
- AB-NHPM will have major impact on reduction expenses

Institutions of Eminence list released

Six higher education institutions, including the Indian Institute of Science (IISc), Bengaluru, the Indian Institutes of Technology at Mumbai and Delhi, and the proposed Jio Institute of the Reliance Foundation, have been named Institutions of Eminence (IoE) by the Centre.

- The Jio Institute in Maharashtra — has been chosen in the greenfield category
- The two other private institutions to be granted the status - the Manipal Academy of Higher Education and BITS, Pilani.
- An empowered committee, under former Chief Election Commissioner N. Gopalaswami, recommended these institutions.

Conference on Consumer Protection at the UNCTAD

The two-day conference was held in Geneva on Consumer Issues.

Consumer Protection in India

1. Consumers in India have been guaranteed rights by an Act of Parliament, namely:

- Right to Safety;
- Right to be informed;
- Right to choose;
- Right to be heard;

- Right to seek redressal; &
- Right to consumer education.

The new Consumer Protection Bill, 2018

- The Bill provides for setting up of an executive agency to be called Central Consumer Protection Authority (CCPA) which
    a. will look into Unfair Trade Practices, Misleading Advertisements etc.,
    b. provision for 'mediation' as an alternate disputes resolution mechanism to facilitate quick disposal of consumer dispute
    c. provision for product liability action arising out of injury to a consumer from a defective product
    d. provisions for preventing unfair trade practices in e-commerce and direct selling
    e. simplification of the adjudication process in the Consumer Fora.
- Consumer Grievance Redressal Mechanism, at National Consumer Helpline which has country wide reach and consumers from any part of the country.
- The Government has been carrying out a country wide multi-media awareness campaign, namely "Jago Grahak Jago" (wake up Consumers)
- For the essential commodities Government fixes a retail sale price
- New Bureau of Indian standards (BIS) Act 2016, establishes the Bureau of Indian Standards (BIS) as the National Standards Body of India.
- The new Act contains provisions for including goods, services and systems, besides articles and processes for the purpose of standardization.
- It has enabling provisions for compulsory Certification of any goods or article or service which is considered necessary in the public interest or for the protection of health, safety of the environment, or prevention of unfair trade practices, or national security.

Swachh Survekshan Grameen 2018

The Ministry of Drinking Water and Sanitation launches the Swachh Survekshan Grameen 2018 (SSG 2018)

Highlights:

- An independent survey agency will conduct the survey in all districts
- Ranking of states and districts on basis of their performance attained on key quantitative and qualitative Swachh Bharat Mission-Grameen (SBM-G) parameters.

1. Direct Observation of sanitation in public places: 30%
2. Citizen's Feedback on sanitation parameters: 35%
3. Service Level Progress on sanitation progress: 35%

Saubhagya Scheme

- Aim to achieve universal household electrification in all parts of country
- Government will provide free electricity to all households identified under Socio-Economic and Caste Census (SECC) data 2011.
- The Rural Electrification Corporation Limited (REC) is nodal agency for operationalisation of scheme throughout country.

Samagra Shiksha Scheme

The Department of School Education and Literacy has formulated the Samagra Shiksha - an Integrated Scheme for School Education as a Centrally Sponsored Scheme

- The program subsumes the three erstwhile Centrally Sponsored Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).

Components:

- Universal Access including Infrastructure Development and Retention
- Gender and Equity
- Inclusive Education
- Quality
- Financial support for Teacher Salary
- Digital initiatives
- Entitlements under the Right of Children to Free and Compulsory Education (RTE) Act, 2009 including uniforms, textbooks etc
- Pre-school Education
- Vocational Education

- Sports and Physical Education
- Strengthening of Teacher Education and Training
- Monitoring and
- Program Management

Right to Information Act, 2005 amendments

The government has proposed amendments to Right to Information Act, 2005

- The Central government seeks control over the tenure, salary and allowances of the Chief Information Commissioner and Information Commissioners at the Centre, and the State Chief Information Commissioners

Demerits of amendment proposals:

- It takes away Information commissioner's autonomy and independence,
- It paves way for government interference in judgements

The Right to Information Act, 2005

- It aims to increase government transparency with the hope of increasing accountability in government functioning.
- The law mandates a timely response to citizen requests for official information.

Unnat Bharat Abhiyan 2.0

Unnat Bharat Abhiyan is a flagship programme of the Ministry of HRD, it aims to link the Higher Education Institutions with set of at least (5) villages, so that these institutions can contribute to the economic and social betterment of these village communities using their knowledge base.

Objectives:

- Identify and select existing innovative technologies, enable customization of technologies, or devise implementation methods for innovative solutions, as required by people
- To allow Higher Educational Institutions to contribute to devising systems for smooth implementation of various Government Programs.

National Policy for Domestic Workers

The Salient features for proposed National Policy for Domestic Workers

- Inclusion of Domestic Workers in the existing legislations
- Registration of Domestic workers.
- Right to form their own associations, trade unions
- Right to have minimum wages, access to social security, protection from abuse, harassment, violence
- Right to enhance their professional skills
- Protection of Domestic Workers from abuse and exploitation
- Domestic Workers to have access to courts, tribunals, etc.
- Establishment of a mechanism for regulation of placement agencies.

Mahila Shakti Kendra Scheme

Government of India has approved a new scheme namely Mahila Shakti Kendra to empower rural women through community participation.

Highlights:

- The scheme is envisaged to work at various levels
- At the national level (domain-based knowledge support)
- At state level (State Resource Centre for Women)
- District Level Centre for Women (DLCW)
- Community engagement through College Student Volunteers is envisioned in 115 aspirational districts.
- District Level Centre for Women (DLCW) to serve as a link between village, block and state level in facilitating women centric schemes and also give foothold for Beti Bachao Beti Padhao (BBBP) scheme at the district level.

Mission Satyanishtha

Indian Railways Launches “Mission Satyanishtha” a Program on Ethics in Public Governance

The objectives:

- To train every employee to understand the need and value of ethics in Personal and Public life
- To deal with ethical dilemmas in life and Public Governance.
- To help understand the policies of Indian Railways on ethics and integrity and the employee's role in upholding the same.

Pradhan Mantri Kaushal Vikas Yojana

The Government is implementing a flagship scheme known as Pradhan Mantri Kaushal Vikas Yojana (PMKVY) on pan–India basis.

Highlights:

- It enables prospective youth to take up Short Term Training (STT) and Recognition of Prior Learning (RPL) through accredited and affiliated training centers.
- The scheme has two components namely
    a) Centrally Sponsored Centrally Managed (CSCM) which is implemented by National Skill Development Corporation (NSDC)
    b) Centrally Sponsored State Managed (CSSM) which is implemented by State Skill Development Missions of the States/UTs
- Training and Assessment fees are completely paid by the Government.
- Training would include soft skills, personal grooming, behavioral change for cleanliness, good work ethics.
- Skill training would be done based on the National Skill Qualification Framework (NSQF) and industry led standards.

Eligible Beneficiaries

- An unemployed youth, college / school dropout
- Has a verifiable identity proof - Aadhaar / Voter id and a bank account.

2. ENERGY AND ENVIRONMENT

2.1 ENERGY

Kudankulam power plant waste disposal

Nuclear Power Corporation of India Ltd to build an Away From Reactor (AFR) facility to store spent nuclear fuel from the Kudankulam power plant.

- KNPP is the single largest nuclear power station in India.
- It is scheduled to have six VVER-1000 reactors with an installed capacity of 6,000 MW of electricity.
- It has been built in collaboration with Atomstroyexport, the Russian state company and NPCIL

Away From Reactor (AFR) facility

The nuclear waste is stored temporarily at a site far from the nuclear plant. It helps

- Safety of the nuclear plant from accident
- Centralized Storage

Disposal of Nuclear Waste

Atomic Energy Regulatory Board (AERB) specifies the limits to discharge of radioactivity from Nuclear power plants in India.

- The emphasis on waste volume minimization, recycle and reuse.
- As a waste management philosophy, no waste is released/disposed to the environment unless the same is cleared, exempted or excluded from regulations.
- Disposal system is designed on multi-barrier principle for ensuring effective containment of radioactivity

Geopolitics and Energy

India was asked by the U.S. administration to drastically cut down crude supply from Iran as U.S. has withdrawn from the Iran nuclear deal and imposed fresh sanctions on Iran's economy, especially on its oil industry.

- Iran was the second-biggest oil supplier to Indian state refiners between April and June 2018

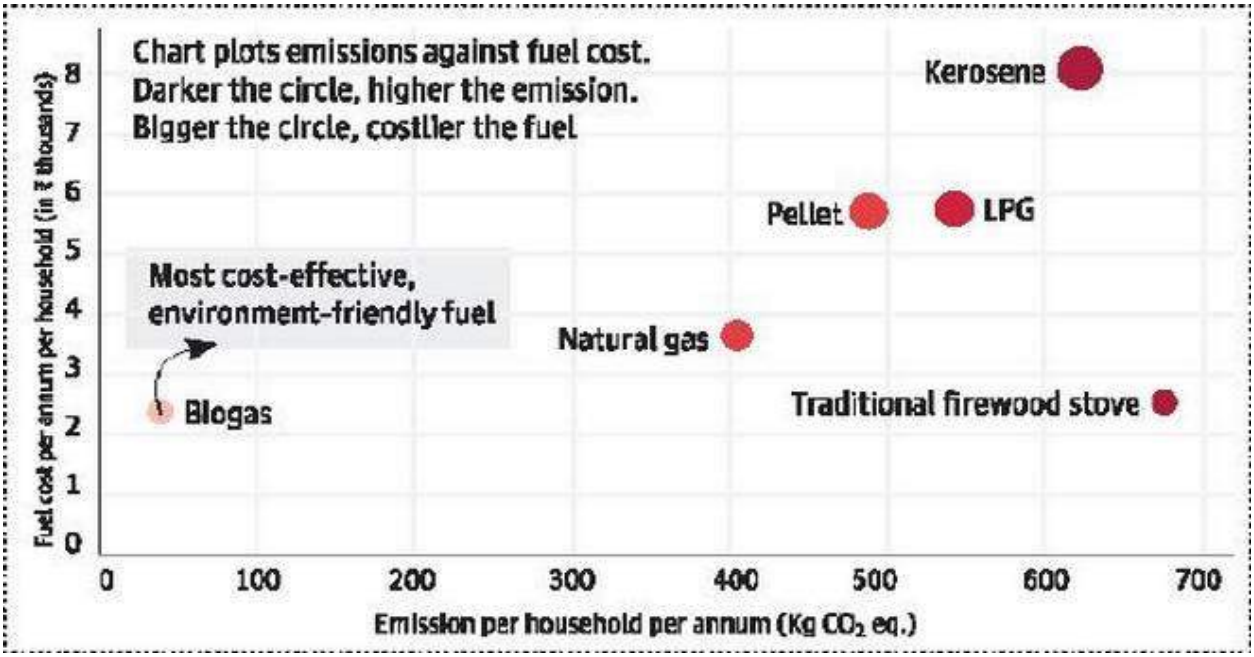
- India is Iran's top oil client after China

Options

- India can replace Iranian crude with supplies from Saudi Arabia, Russia, and the United States
- Iran may end special privileges to India, including rupee-denominated imports

A clean cooking strategy

The choice of cooking fuel in households (especially rural) has a huge impact on living conditions especially for women and children.



Comparing the options:

- Biogas accounts for the lowest effective greenhouse gas emission; PNG and then LPG are next

Initiatives:

National level programmes to ensure that most switch to clean cooking fuels have been initiated since the 1980s.

- National Project on Biogas Development (NPBD)

- Pradhan Mantri Ujjwala Yojana-a cumulative target of providing LPG connections to more than eight crore families

Policy framework for Production Sharing Contracts

The Cabinet Committee on Economic Affairs chaired by Prime Minister has approved the policy framework for streamlining the operations of Production Sharing Contracts (PSCs) for increased domestic production of hydrocarbon resources.

The framework:

- Encouraging exploration & production(E&P) activities in North Eastern Region (NER)
- Extending tax benefits to operational blocks under Old policy discovered fields

Production Sharing Contracts:

- Production Sharing Contract (PSC) refers to an agreement between Contractor and Government whereby Contractor bears all exploration risks, production and development costs in return for its stipulated share of (profit from) production resulting from this effort.
- The costs incurred by the contractor are recoverable in case of commercial discovery.
- Production Sharing Contracts became widely adopted as part of the New Exploration and Licensing Policy

New Exploration and Licensing Policy:

- New Exploration Licensing Policy (NELP) is a policy adopted by Government of India in 1997
- NELP was applicable for all contracts entered into by the Government between 1997 and 2016.
- In March 2016, Hydrocarbon Exploration and Licensing Policy (HELP) replaced the NELP.

National leader in renewable energy generation

Karnataka is the new national leader in renewable energy generation.

Highlights:

- It has overtaken Tamil Nadu that had long been India's top
- Karnataka has a total of 12.3 gigawatts (GW) of renewable capacity installed till March, after having added five GW in 2017-18 alone
- Tamil Nadu leads in wind energy capacity
- Karnataka introduced reverse auctions for wind-powered electricity
- Karnataka is set to move from being a net importer of electricity to having a net balance, and it could become a net exporter

Exploitation of Atomic Minerals

Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), has the mandate to identify, evaluate and augment mineral resources of uranium, thorium, niobium, tantalum, beryllium, lithium, zirconium, titanium, rare earths (containing uranium and thorium) besides beach sand minerals like garnet and sillimanite. AMD has identified adequate resources of atomic minerals in the country. The details of the resources of atomic minerals are below:

- Uranium – uranium oxide (U3O8)
- Beach Sand Minerals [BSM]
    - Thorium (as monazite)
    - The mineral monazite, containing ~ 55 - 60% total Rare Earth Elements (REE), is also the major resource for REE
    - Titanium (as ilmenite, leucoxene and rutile)
    - Zirconium (as zircon)
    - Garnet
    - Sillimanite
- At present, uranium deposits established by AMD are mined by Uranium Corporation of India Limited (UCIL), a PSU of DAE.
- In respect of beach sand minerals, the mining operations are being carried out by both PSUs and private entrepreneurs.
- In respect of other atomic minerals like beryl, columbite, tantalite, lepidolite etc., no specific mining operations are being carried out.

Kochi airport won UN's champion of earth prize -2018

Cochin International Airport Limited (CIAL) has been selected for the champion of earth prize -2018, the highest environmental honour instituted by United Nations.

Highlights:

- The CIAL was chosen for 'action and inspiration ' which recognises individuals or organizations that have taken bold environmental action, and, in doing so, inspired others to follow in their footsteps
- CIAL, the company which owns and operates country's first airport built under public private partnership mode became power neutral on August 18, 2015
- CIAL is honoured for its successful implementation of solar energy project

The Draft National Energy Policy

The Draft National Energy Policy has rolled out by the NITI Aayog with the primary goal of doing planning related to energy.

Objectives:

- The policy aims to improve the energy security of the country by reducing the dependency on imports
- To generate at least 175 GW of energy from renewable sources by the year 2022.
- It proposes higher taxes on SUVs and also promotes the use of public transport like metro, CNG buses to improve the air quality.
- It also promotes phasing out of IC engines in vehicles and use of eco-friendly electric engines.
- As per the aim of this policy each and every household in the country will be electrified by the year 2022 and also get access to clean cooking fuel

2.2 ENVIRONMENT

Decreasing 'greenness' in India's forests

Hyderabad's National Remote Sensing Centre analysed NASA's MODIS satellite images of India's forests at eight-day intervals for 15 years (2001 to 2014) and assessed the persistent decreases in greenness.

Highlights:

- The highest degradation is in moist deciduous forests especially in the states of Chhattisgarh, Odisha, Maharashtra and Madhya Pradesh.
- Wet evergreen forests – including those in the Western Ghats and Eastern Himalayas – are also affected, with the major changes observed in Karnataka and Arunachal Pradesh, followed by Kerala and Meghalaya.
- More than 15% of India's total mangrove forests also showed a decrease in greenness.

Classification of Forest:

1. Tropical forest:

A great majority of the forests found in India are of this type. Tropical forests are of two types:

a) Tropical moist forests.
b) Tropical dry forests.

2. Subtropical montane forests:

These forests are found in the region of fairly high rainfall but where temperature differences between winter and summer are less marked.

3. Temperate Montane forests:

These forests occur in the Himalayas at the altitude from 1800 to 3800 metres where humidity and temperature are comparatively low.

4. Sub-alpine Forests

The sub-alpine forests are found throughout Himalayas from Ladakh in the west to Arunachal in the east at the altitude from 2800 m to 3800 m.

5. Alpine forests:

Plants growing at the altitude from 2900 to 6000 m are called alpine plants.

Delhi notifies list of fuels permissible for industrial use

The Delhi Pollution Control Committee (DPCC) has issued a notification with a list of fuels permissible for industrial use within the NCT of Delhi.

Why the control?

- Dust particles in the air get coated with toxic substances from combustion and can go deep into the lungs.

Permitted fuels:

- Permitted the fuels including Bharat Stage VI compliant: Petrol and diesel within 10 ppm sulphur
- Liquid Petroleum Gas
- Natural gas/Compressed Natural Gas (CNG)
- Aviation turbine fuel
- Coal with low sulphur (less than 0.4 per cent) will be permitted for use only in thermal power plants.

Eco-Sensitive Zones around wildlife sanctuary

In the Eco sensitive zone, industrial or mining activity are restricted.

- Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India
- ESZs are declared around Protected Areas, National Parks and Wildlife Sanctuaries.
- The purpose of declaring ESZs is to create some kind of “shock absorbers” to the protected areas.

Vitro Regeneration of Endangered aquatic plant

An endangered aquatic plant, endemic to north Kerala has been reintroduced into the ecosystem.

- The scientists multiplied the endangered species and introduced it into the ecosystem
- Micropropagation of the plant is done using tissue culture methods.

Trees multiple benefits

- Stabilizing the soil
- Recycling nutrients
- Cooling the air
- Modifying wind turbulence
- Intercepting the rain
- Absorbing toxins
- Reducing fuel costs
- Neutralizing sewage
- Increasing property values
- Promoting tourism
- Encouraging recreation
- Reducing stress
- Improving personal health
- Providing food, medicine and
- Accommodation for other living things

The Uttarakhand HC declares Animal kingdom as legal entity

The Uttarakhand High Court has declared entire animal kingdom i.e. all animals, including avian and aquatic species as legal entities with rights,duties and liabilities of living person.

- The move aims to ensure "greater welfare" of animals
- Create an animal welfare committee in every district of the state.
- All citizens of Uttarakhand have the responsibility to protect animals and ensure their welfare.

Legal entity:

- A legal entity means an entity which acts like a natural person but whose acts are processed within the ambit of law.
- This means the animal kingdom could be represented by a custodian.

Workshop on Greenhouse Gas Inventories in Asia

The 16th Workshop on Greenhouse Gas Inventories in Asia (WGIA16) was held in Delhi. India is hosting WGIA for the first time.

WGIA

- It is an initiative of Government of Japan to improve the quality of Greenhouse Gas Inventories of Asian countries
- Building capacities through training and exchange of experience.
- A reliable and robust inventory is the backbone of climate action.
- It will contribute towards enhanced reporting and transparency as required under the Convention and its Paris Agreement.
- 15 countries including Brunei, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Singapore, Thailand and Vietnam are WGIA members

Threats to Harrier birds

Harrier birds, a migratory raptor species that regularly visits India, are declining.

Threats:

- The loss of grasslands, either to urbanisation or to agriculture
- Excessive use of pesticides in farms in and around the roosting sites.
- The pesticides kill grasshoppers, the harriers' primary prey.

About Harrier bird:

- Every winter, several species of harrier birds travel thousands of kilometres from Central Asia for the grasslands of India.

- Globally, of the 16-harrier species, two are listed as endangered by the International Union for Conservation of Nature.

Google and UN to track environmental changes

The UN has entered into a partnership with Google to monitor the impacts of human activity on global ecosystems by using sophisticated online tools.

Highlights:

- To develop a platform to enable governments, NGO's and the public to track specific environment-related development targets with a user-friendly Google front-end
- It has its initial focus on freshwater ecosystems including mountains, forests, wetlands, rivers, aquifers and lakes.
- Google will periodically produce geospatial maps and data on water-related ecosystems by employing massive parallel Cloud computing technology.
- Satellite imagery and statistics will be generated to assess the extent of change occurring to waterbodies.
- To establish a platform for open-source data and analysis of the UN Sustainable Development Goals.
- To enable all countries with equal access to the latest technology and information in support of global climate action and sustainable development

India's polar research to Arctic

National Centre for Antarctic and Ocean Research (NCAOR) of Indian Government is planning to establish new observation systems in Arctic circle.

Aim:

- To study about Climate change
- Exploration of hydrocarbon reserves in Arctic
- To study about the Monsoon impact in India due to sea level rise
- Geopolitical collaborations

IndARC: India's underground observatory located at t the Kongsfjorden fjord, half way between Norway and the North Pole.

System of Air Quality and Weather Forecasting(SAFAR)

India unveiled a state-of-the-art Air Quality and Weather Forecast System– SAFAR (System of Air Quality and Weather Forecasting)

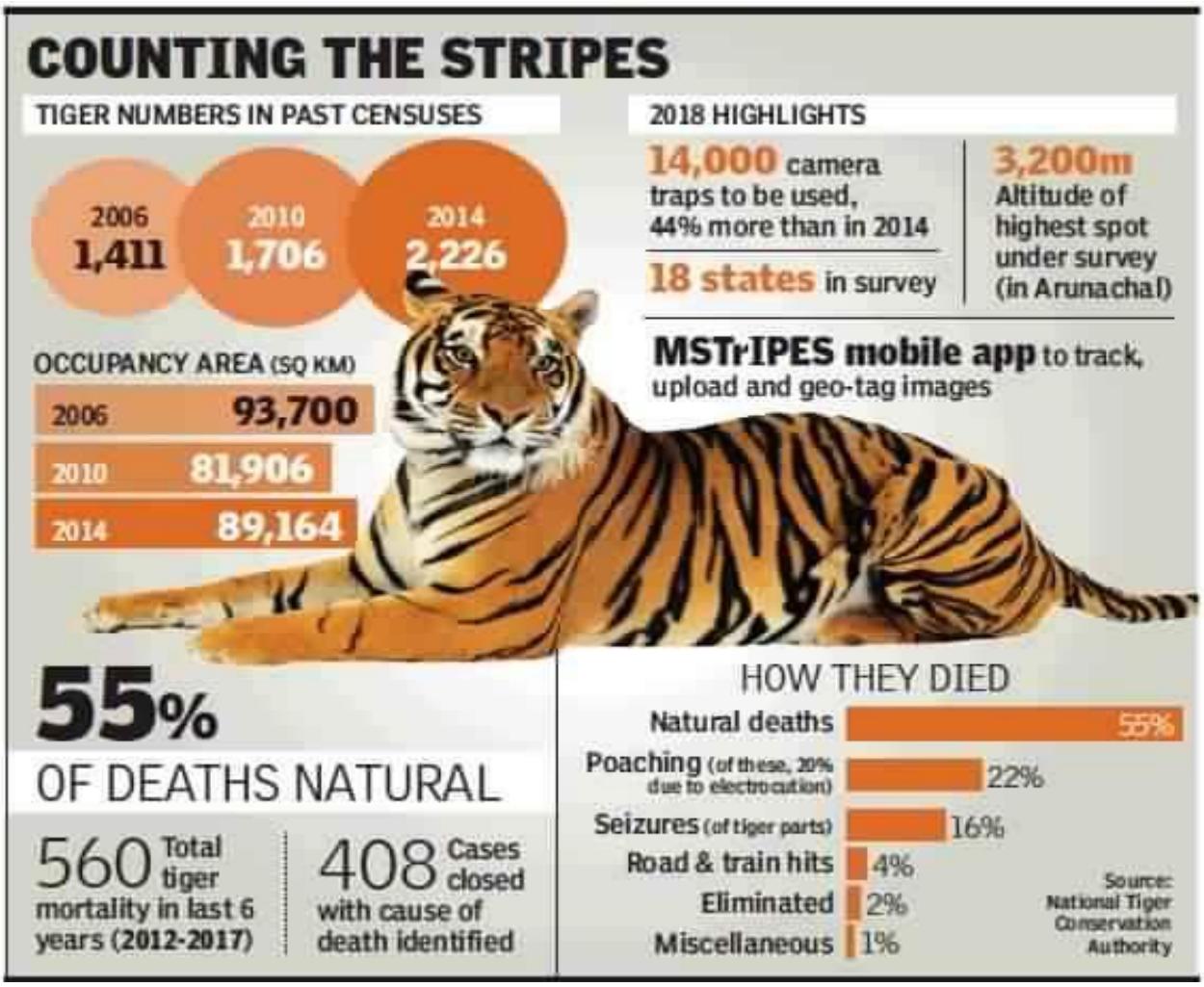
Key Facts:

- The giant true colour LED display gives out real-time air quality index on 24x7 basis with colour coding alongwith 72-hour advance forecast.
- It was developed indigenously by Indian Institute of Tropical Meteorology, Pune and operationalized by India Meteorological Department (IMD).
- It also measure sun's UV-Index in addition to monitoring and forecasting of regular air quality and weather parameters
- The mission model project SAFAR is implemented in four cities of India – Delhi, Pune, Mumbai and Ahmedabad as an operational service.
- The system will be an integral part of India's first Air Quality Early Warning System
- The parameters like PM2.5, PM10, Sulfur Dioxide, Ozone, Nitrogen Oxides, Carbon Monoxide and also the existence of Benzene, Toluene and Xylene are monitored.

India's fourth national tiger census

The fourth All India Tiger Estimation is undertaken to ascertain India's current tiger population. The final number is expected by the first quarter of 2019.

- India's tiger census is largest such effort of its kind across the globe
- India's tiger population has been observed to increase at a rate of around 5.8% per year since 2006.
- India is estimated to be home to around 70% of the world's tigers
- India will be conducting the census along with the three other tiger-range countries — Nepal, Bhutan and Bangladesh.
- In India, tiger census is carried out after a gap of every four years by the National Tiger Conservation Authority (NTCA).



Methods used:

- Camera trapping by using Global Positioning Systems
- M-STrIPES, a mobile-based application, to collect data on the field.
- The Tiger's pugmarks identification

Cloud brightening, 'sun shields' to save Barrier Reef

The reef is reeling from two straight years of bleaching as sea temperatures rise because of climate change. It is also under pressure from farming runoff, development and the predatory crown-of-thorns starfish.

- The government has pledged to tackle climate
- Innovative ideas to protect the site

1. Cloud brightening where salt crystals harvested from seawater are fired into clouds, making them more reflective and therefore deflecting solar rays back into space.
2. Biodegradable "sun shield", where an ultra-thin film containing light-reflecting particles covers some reef waters to protect corals from heat stress.
3. Mass producing coral larvae with the aid of 3D-printed surfaces to support new growth, and large-scale harvesting and relocation of larvae.

India to give flash-flood warning to Asian nations

The world meteorological organization (WMO) designated India as a nodal centre for preparing flash-flood forecasts.

- It implies that India will have to develop a customized model that can issue advance warning of floods in Vietnam, Sri Lanka, Myanmar and Thailand.
- India currently has a warning system for Tsunami that also doubles up a warning system for several Asian countries.
- The Central Water Commission, monitors India's dams, warns of rising water level in the reservoirs.
- The CWC recently tied up with Google to develop a software application to visualize rising water levels during the heavy rains.

Flash flood guidance system:

- It provides forecasts by computing the likelihood of rainfall and the soil moisture levels to warn of possible floods.
- Use of satellite mapping and ground based observations.
- Aims to provide forecasts six hours in advance.

World Meteorological Organization:

- It is an intergovernmental organization with a membership of 191 Member States and Territories.
- It provides the framework for essential international cooperation among the National Meteorological and Hydrological Services of its 191 Member States and Territories

Deep Ocean Mission (DOM)

The Union Earth Sciences Ministry unveiled a blueprint of the 'Deep Ocean Mission (DOM)'. The mission proposes to explore the deep ocean similar to the space exploration being done by ISRO

Highlights:

- An offshore desalination plant that will work with tidal energy
- Developing a submersible vehicle that can go to a depth of at least 6,000 metres with three people on board.
- The focus will be on technologies for deep-sea mining, underwater vehicles, underwater robotics and ocean climate change advisory services, among other aspects.

3. ICT AND APPLICATIONS

e-Beat System

The Salem City Police of Tamil Nadu have launched a unique e-Beat System to ensure effective patrolling of the entire city.

- The books are substituted by the QR tags that can be fixed at the place of check and visit by the beat officers.
- Each beat officer and patrol officer are provided with a smart phone with 4G connectivity in which the application is loaded.
- The beat officers have to scan the QR tag from the application through mobile camera as soon as they reach that particular point.
- The software automatically records the time at which QR tag is scanned.
- All these data are stored in the server and can be retrieved and analysed whenever required.

Advantages:

- The time of visit of the beat officers is recorded electronically and cannot be manipulated.

Blockchain technology for subsidy payments

- NITI Aayog and Gujarat Narmada Valley Fertilizers & Chemicals Limited (GNFC) signed a statement of intent (SOI) to work together towards using Blockchain technology for fertiliser subsidy management.
- Will work on implementing a proof-of-concept (PoC) application for using the technology in subsidy disbursements

A proof of concept (POC)

- It is a demonstration, the purpose of which is to verify that certain concepts or theories have the potential for real-world application.
- POC is therefore a prototype that is designed to determine feasibility.
- Proof of concept is also known as proof of principle

Flying AI companion

A robot to assist astronauts, launched from Florida become the first artificial intelligence-powered personal companion in space

Highlights:

- The Crew Interactive Mobile Companion, or CIMON, is English-speaking
- CIMON will verbally communicate step-by-step instructions
- CIMON could help mitigate the disorientation astronauts may feel in space.

cVigil app

The Election Commission launched an Android-based mobile application named "cVigil" for citizens

- To share proof of malpractices by political parties, their candidates and activists when the Model Code of Conduct is in force.
- The mobile application facilitates sharing of geo-tagged photographic and video evidence without disclosing the identity of the sender.
- The uploaded information will be transmitted to the control room, and other respective teams for further action.

Coal Mine Surveillance & Management System and Khan Prahari App

Union Minister of Coal, Railways, Finance & Corporate Affairs launched the Coal Mine Surveillance & Management System (CMSMS) and Mobile Application 'Khan Prahari'.

Coal Mine Surveillance & Management System:

- The basic objective of CMSMS is reporting, monitoring and taking suitable action on unauthorized coal mining activities.
- The CMSMS is a web-based GIS application through which location of sites for unauthorized mining can be detected.
- The system will use satellite data to detect
- It uses public input also to capture information on unauthorised coal mining.

Khan Prahari Mobile App:

- Citizens can provide information using this app.
- One can upload geo-tagged photographs of the incident along with textual information directly to the system.
- Once reported, the information will be automatically directed to the nodal officers.
- The complainant can also track his complaint through the system.
- The identity of the complainant shall not be revealed.

Crew Escape System technology

- The Crew Escape System is an emergency escape measure designed to quickly pull the crew module along with the astronauts to a safe distance from the launch vehicle in the event of a launch abort
- The first test (Pad Abort Test) demonstrated the safe recovery of the crew module.

ICT helps in Transparency

The government mooted a separate TV channel for live-streaming court proceedings.

- Live streaming of the proceedings would bring transparency and access to justice

- Is an extension of the 'open court' system
- would keep a check on lawyers' conduct inside the courtrooms

Net neutrality

Telecom Commission (a group within India's Department of Telecom) has approved the recommendations made by the Telecom Regulatory Authority of India (TRAI) on net neutrality.

Highlights:

- The move aims to ensure that all web traffic is treated fairly
- The internet service providers should not block, throttle, or favor any content or services (with a few reasonable exceptions).
- It will not allow anybody to create monopolies on the internet by getting specialized treatment by paying for it.
- Allowing fast lanes only for 'critical' services
- Keep 'content delivery networks' out of their ambit.

A content delivery network (CDN)

A content delivery network (CDN) is a system of distributed servers that deliver pages and Web contents to a user, based on

1. the geographic locations of the user,
2. the origin of the webpage and
3. the content delivery server.

CDN is effective in speeding the delivery of content of websites with high traffic and websites that have global reach. The closer the CDN server is to the user geographically, the faster the content will be delivered to the user.

MeerKAT radio telescope

The world's largest telescope MeerKAT- a super radio telescope project was unveiled by South Africa.

Highlights:

- It will be the biggest radio telescope of its kind in the southern hemisphere.

- MeerKAT will be incorporated into the complex Square Kilometre Array (SKA) instrument.
- It will address some of the key science questions in modern astrophysics

The SKA Project:

- The Square Kilometre Array (SKA) project is an international effort to build the world's largest radio telescope.

- It will have the ability to image huge areas of sky which no survey telescope has ever achieved on this scale with this level of sensitivity.
- Both South Africa's Karoo region and Western Australia's Murchison Shire were chosen as co-hosting locations.

Radio Telescope

- Radio telescopes collect weak radio light waves, bring it to a focus, amplify it and make it available for analysis.
- We use radio telescopes to study naturally occurring radio light from stars, galaxies, black holes, and other astronomical objects.
- Also can use them to transmit and reflect radio light off of planetary bodies.
- Radio wavelengths range from 1 millimeter to over 10 meters long
- Because radio waves are so long and cosmic radio sources are extremely weak, radio telescopes are the largest telescopes in the world

Why Arrays?

- To have their resolution compare to optical telescopes, a radio telescope's antenna size needs to be much, much larger. (Angular resolution depends on the wavelength of observations divided by the size of the antenna)
- The solution is to combine the views of a group of antennas spread over a large area to operate together as one gigantic telescope

Face-recognition technology

- A facial recognition system is a technology capable of identifying or verifying a person from a digital image or a video frame from a video source.
- There are multiple methods in which facial recognition systems work, but in general, they work by comparing selected facial features from given image with faces within a database.

Microsoft has called for regulation of facial recognition technology

Why Regulation?

- Facial recognition technology raises significant human rights and privacy concerns
- It has potential for abuse

Domestication of cybersecurity products

The Ministry of Electronics and Information Technology (MeitY) mandated giving preference in all public procurement to locally produced cybersecurity products where intellectual property rights are owned by companies or start-ups incorporated in India:

- Aims to enhance income
- Enhance employment in the country
- To use and promote indigenous cybersecurity products
- To protect information space

Chandrayaan-II Mission/GSLV-F10

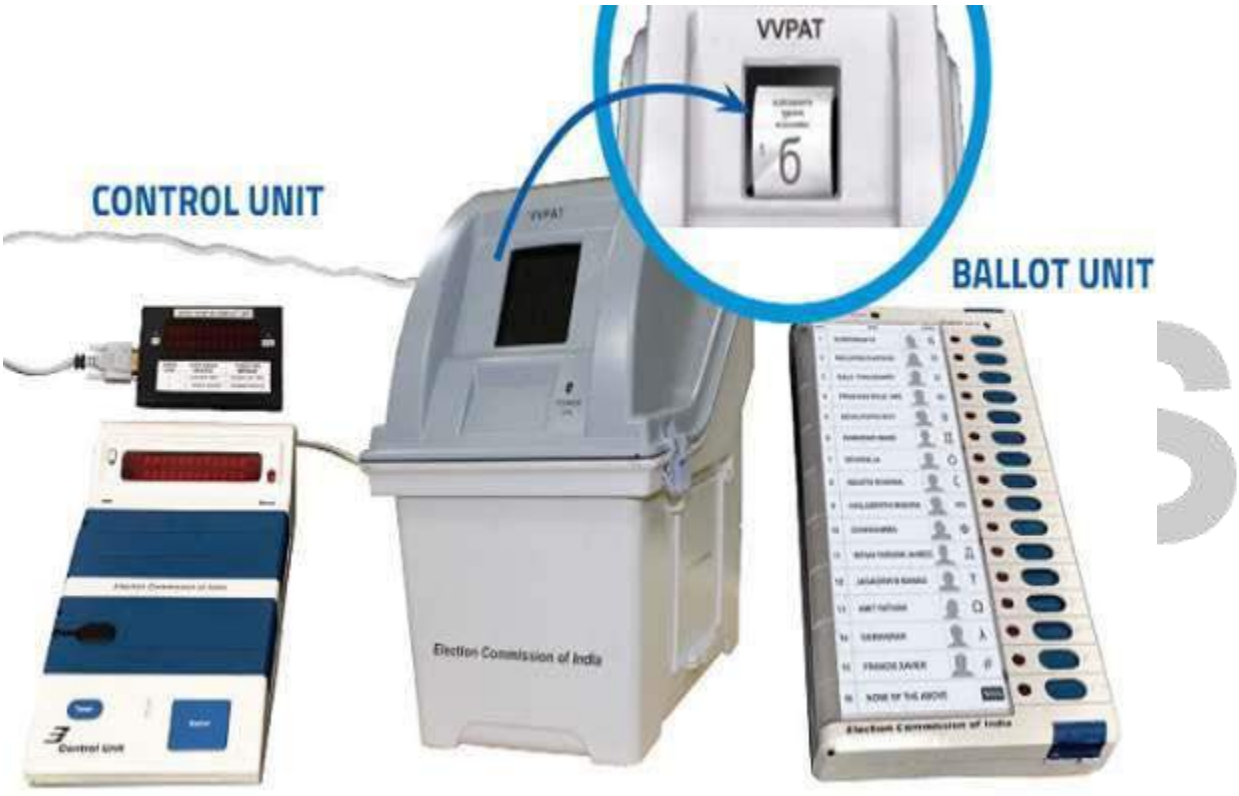
Indian Space Research Organisation (ISRO) is planning to deploy a rover on the lunar surface through Chandrayaan-2 mission.

Highlights:

- It is India's second mission to the Moon is a totally indigenous mission comprising of an Orbiter, Lander and Rover.
- The instruments on Rover will conduct in-situ analysis of elements such as Na, Mg, Al, Si, etc; in the vicinity of landing site.

- The mission will carry a six-wheeled Rover which will move around the landing site in semi-autonomous mode as decided by the ground commands.
- The instruments on the rover will observe the lunar surface and send back data, which will be useful for analysis of the lunar soil.
- The payloads will collect scientific information on lunar topography, mineralogy, elemental abundance, lunar exosphere and signatures of hydroxyl and water-ice.

Digitally certified EVM/VVPATs



Voter Verifiable Paper Audit Trail (VVPAT) machines are used during election process to verify that the vote polled by a voter goes to the correct candidate

- They are a second line of verification
- Gives instant feedback to the voter showing that the vote polled has in fact been allotted against the candidate chosen
- Ensuring transparency of voting.

The digital certification

- The Control Unit and Ballot Unit can communicate with each other.
- If someone plants a Ballot Unit or Control Unit from outside, the digital signature will not match and the system would stop functioning

Digitalization in Education System

Several initiatives have been taken to increase use of Digitalization in Education System.

The Initiatives are:

- ICT in Education Curriculum for School System - ICT curriculum for teachers and students has been developed by NCERT
- e-pathshala – e-pathshala has been developed by NCERT (National Council for Educational Research and Training) for showcasing and disseminating all educational e-resources including textbooks, audio, video, periodicals and a variety of other print and non-print materials
- National Repository of Open Educational Resources (NROER) - an initiative to bring together all digital and digitisable resources across all stages of school education and teacher education
- SWAYAM: A Massive Open Online Courses (MOOCs) platform popularly known as SWAYAM (Study Webs of Active learning for Young Aspiring Minds) has been launched. The portal is offering various online courses for school education and higher education.
- SWAYAM PRABHA: A programme for utilization of satellite communication technologies for transmission of educational e-contents through 32 National Channels i.e. SWAYAM PRABHA DTH-TV has been launched.
- KVS initiatives:- ICT Skills are imparted in all the Kendriya Vidyalayas to the students of classes III to XII.
- Operation Digital Board:- An initiative has been taken by Government of India to provide interactive digital boards to nearly 15 lakh classrooms across the country for 9^{th} standard to post graduate level, where they can receive lectures from best teachers/professors and access quality e-content.

Innovate India Platform

Atal Innovation Mission, NITI Aayog & MyGov launches "Innovate India Platform". The #InnovateIndia portal will serve as the common point for all the innovation happening across the nation.

Features:

- The platform is open to all Indian citizens
- The users can View, comment, share, and rate the innovations crowdsourced on the #InnovateIndia platform
- These innovations can also be shared on various social media platforms such as WhatsApp, Facebook, and Twitter

Atal Innovation Mission:

- Atal Innovation Mission (AIM) including Self-Employment and Talent Utilization (SETU) is Government of India's endeavour to promote a culture of innovation and entrepreneurship.
- Its objective is to serve as a platform for promotion of world-class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities, particularly in technology driven areas.

E-Government Development Index 2018

United Nation released E-Government Development Index 2018

Highlights:

- The only global initiative to measure and track how governments are faring on the e-governance front.
- E-government can facilitate integrated policies and services across the three dimensions of sustainable development
- To focus on e-government initiatives is that there is a clear link between greater e-governance and easier public access to government services and a reduction in poverty and inequality.
- With an EGDI index score of 0.5669, India is just above the world average of 0.55.

- The Asian leader in e-government, South Korea, scored 0.9010

E-Participation Index 2018:

- The sub-index of E-Government Development Index 2018.
- The EPI looks at issues like e-information, e-consultation and e-decision making to arrive at a score.

The data protection Bill 2018

An expert panel headed by Justice B.N. Srikrishna, on Friday, submitted its report on data protection as well as the draft 'The Personal Data Protection Bill, 2018'

Key recommendations:

- The law should be applicable to processing of personal data if such data has been used, shared, disclosed, collected or otherwise processed in India
- It covers the company which are incorporated under Indian law, irrespective of where it is actually processed in India or not.
- The processing of sensitive personal data should be on the basis of "explicit consent."
- In case of fiduciaries that are not present in India (eg. Facebook), the law is applicable to one who carry out business in India.

DigiYatra

- DigiYatra is an industry-led initiative coordinated by the Ministry of Civil Aviation in line with Digital India programme
- It aims to transform the flying experience for passengers.
- The facility will use digital technology all the way from ticket booking to airport entry check, security check and aircraft boarding.
- This will also facilitate walk-through security scanners swiftly owing to advanced biometric security solution

4. KEY INITIATIVES OF GOVERNMENT

Margdarshan

- Margadarshan scheme is under the purview of All India Council for Technical Education (AICTE).
- The scheme aims to provide mentoring to institutes by a well performing Institute
- Institutions of repute will act as a mentor with its existing facilities to serve as the hub to guide and disperse knowledge to 10 technical institutions.
- Government owned, aided and self financed institutes and universities approved by AICTE can participate

Pradhan Mantri Yuva Yojana

- Pradhan Mantri YUVA Yojana (Yuva Udyamita Vikas Abhiyan) is a is a centrally sponsored Scheme on entrepreneurship education and training
- implemented by the Ministry of Skill Development and Entrepreneurship
- The scheme aims at creating a culture of Entrepreneurship amongst youth by motivating, educating and equipping them with basics skills of entrepreneurship.
- Also, promote development of social enterprises for inclusive growth.
- PM-YUVA Yojana has four specific objectives

a) Educate and equip potential and early stage entrepreneurs
b) Connect entrepreneurs in enabling networks of peers, mentors, incubators, funding and business services
c) Coordinate and support entrepreneurs through Entrepreneurship Hubs(E-Hubs)
d) Catalyze a culture shift to support aspiring entrepreneurs

The target beneficiaries of the scheme are categorized as follows:

1. Traditional students enrolled in degree programme across undergraduate/ postgraduate courses/ PhD programme/ Diploma
2. School Students
3. Students in Industrial Training Institutes (ITIs)

4. All citizens including unorganized sector, women, and existing entrepreneurs in rural as well as urban areas, who would like to take up entrepreneurship education through coordination and support programmes

Ujwal DISCOM Assurance Yojana (UDAY)

- It is to provide financial and operational turnaround of power distribution companies and aim at long term affordable and accessible 24x7 power supply to all.
- It has target of making all DISCOMs profitable by 2018-19 through four initiatives such as Improving operational efficiencies of Discoms, Reduction of cost of power, Reduction in interest cost of Discoms, Enforcing financial discipline on DISCOMs through alignment with state finances.
- Under this programme, States shall take over 75% of DISCOM debt over two years
- DISCOM debt not taken over by the state shall be converted by the banks / FIs into loans or bonds

Vahan and Sarathi

- VAHAN and SARATHI are e-governance initiative of Ministry of Road Transport and Highways
- It aims at facilitating computerization of Road Transport Offices (RTOs) across the country and a common pan-India level same standard for Registration certificate and driving licenses.
- The software VAHAN is for Vehicle Registration and SARATHI for Driving Licenses

INAM PRO

- It is a web-based application for Infrastructure and Material Providers
- It brings together the material providers and the prospective buyers engaged in executing central/state funded roads and highways and bridge construction projects in a common platform.
- Given the success of INAM-PRO with cement, other materials like steel and steel slag have also been brought on this platform so as to make this as a comprehensive e-marketplace for infrastructure providers.

Aajeevika Grameen Express Yojana

- It is a new sub-scheme under Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAYNRLM).
- Its main objective is to provide an alternative source of livelihood to members of Self Help Groups (SHGs).
- It will provide safe, affordable and community monitored rural transport to connect remote villages with key services and amenities.
- Under this scheme, Community Based Organisation (CBO) will provide interest free loan from its own corpus to the Self Help Group members for purchase of vehicles

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

- DDU-GKY is tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth.
- It focused on rural youth between the ages of 15 and 35 years from poor families
- Special initiatives under DDU-GKY:

1. Himayat: A special scheme for the youth (rural & urban) of Jammu & Kashmir.
2. Roshni: A special initiative for the rural youth of poor families in 27 Left-wing Extremist (LWE) districts across 9 states.

SATYAM

- SATYAM stands for Science and Technology of Yoga and Meditation is a new programme launched by DST to rejuvenate research on yoga and Meditation.
- Its objective is to tap potential for safer, holistic and cost effective treatment of physical and mental health problems.

All School Monitoring Individual Tracing Analysis (ASMITA)

- It is launched under Shala AsmitaYojana (SAY).
- SAY aims to track the educational journey of school students from Class I to Class XII across the 15 lakhs private and government schools in the country
- ASMITA will be an online database which will carry information of student attendance and enrolment, learning outcomes, mid-day meal service and infrastructural facilities among others.

- Students will be tracked through their Aadhaar numbers

Schemes for Divyangjans

- Reservations for Divyangs in Govt. jobs rose from 3% to 4%.

Sugamya Bharat Abhiyan

- Objective is to make at least 50 percent of all government buildings in the national capital and all state capitals "fully accessible" for the disabled by December 2018
- Similar deadlines have been set to make all airports and at least 50% railway stations accessible to the disabled
- Special camps organized for distribution of Aids and Assistive devices to 6 lakh persons with disabilities.

Saksham

Scholarship scheme to provide scholarship to differently abled students to pursue technical education

NIRAMAY Yojana

Rs one lakh health insurance cover to people with autism, cerebral palsy and many disabilities

The Right of Persons With Disabilities Act, 2016

- Types of disabilities have been increased from existing 7 to 21
- Speech and Language Disability and Specific Learning Disability have been added for the first time
- Acid Attack Victims have been included

Make In India Outcomes

- Partnership between the Government & Industry has increased
- India has emerged as one of the fastest growing major economies.
- India has been ranked 3rd in the list of top prospective host economies for 2016-18 in the World Investment Report (WIR) 2016 of UNCTAD.
- Also India features amongst top 10 economies in terms of FDI inflows according to WIR 2016.
- India's ranking in World Bank's Ease of Doing Business Index has made giant leap of 30 positions – from 130 in 2016 to 100
- India is one of the most open economies of the world when it comes to sectors opened up for FDI
- The Govt. of India has also increased autonomy in the FDI inflows
- FDI in India has been opened in many key sectors such as - Defence Manufacturing, Food Processing, Telecommunications, Agriculture, Pharmaceuticals, Civil Aviation, Space, Private Security Agencies, Railways, Insurance and Pensions, Medical Devices and Pensions

Disha Portal

- It is a data intelligence platform that will provide all information to the elected representatives to track the performance of all the major flagship schemes of the different central ministries in their respective districts and constituencies
- The portal will help in planning and evaluating time-bound development of the districts with regards to a scheme, such as Swachh Bharat Mission, Mahatma Gandhi National Rural Employment Guarantee Scheme, Pradhan Mantri Ujjwala Yojana, among others.
- With the help of the DISHA Dashboard, the District Development Coordination and Monitoring Committee can access data at the level of a state, district, sub district and Gram Panchayat.
- The main purpose of the committee is to coordinate with Central and State and local Panchayat Governments.
- The chairperson of the committee is the senior most MP (Lok Sabha) elected from the district, nominated by the Ministry of Rural Development.

National Initiative for Development and Harnessing Innovations(NIDHI)

- NIDHI is an umbrella program for nurturing ideas and innovations (knowledge-based and technology-driven) into successful startups.
- It aims to take forward student innovations in IEDC (Innovation and Entrepreneurship Development Centres) programme to commercialization stage and to accelerate the journey of idea to prototype by providing initial funding assistance

LOTUS HR Project

- The project LOcal Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS HR) is an Indo- Netherlands joint project funded by Department of Biotechnology (DBT), Govt of India and The Govt of Netherlands
- The project aims to demonstrate a novel holistic waste-water management approach, that will produce clean water, while simultaneously recovering nutrients and energy from the urban waste water, thus converting drain into profitable mines
- Special attention will be paid to pathogen removal and removing conventional and emerging pollutants
- The project will develop an innovative pilot scale plant, suitable to cope with Indian conditions in a location specific manner.

Devasthal Optical Telescope

- It is India's largest ground-based optical telescope
- The telescope is the product of an Indo-Belgian collaborative effort.
- It is going to be operated by the Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous research body under the Department of Science and Technology.
- It will also be Asia's largest ground-based optical telescope, succeeding the Vainu Bappu Observatory in Kavalur, Tamil Nadu.

National Initiative on Climate Resilient Agriculture (NICRA)

- The mega project has three major objectives of Strategic research, Technology demonstrations and Capacity building.
- It was launched by Indian Council of Agriculture Research (ICAR).

- Its aims to make farmers self-reliant by use of climate resilient agricultural technologies and management of natural and manmade resources for sustaining agriculture in the era of climate change.
- It has four components:
    - Strategic research on adaptation and mitigation,
    - Technology demonstration to cope with current climate variability
    - Capacity Building
    - Sponsored competitive research to fill critical gaps

Project Sunrise

- The project is to tackle the increasing HIV prevalence in the North-Eastern states
- It will cover one lakh people living with HIV/AIDS by giving them treatment and care facilities free of cost
- It will be implemented in addition to the existing projects of the National AIDS Control Organization (NACO)

Gharib Nawaz Skill Development Centre

- Ministry of Minority Affairs has inaugurated India's first Gharib Nawaz skill development centre in Hyderabad.
- It is launched for providing short term job oriented skill development course for youths belonging to minority communities
- It offers certificate course in Goods and Services Tax accounting/programming and other related subjects.

Hamari Dharohar Scheme

- The scheme aimed preservation of rich heritage and culture of minority communities of India.
- Funding under the scheme is project based and not State/District-wise
- A project has been initiated to translate documents belonging to medieval period on the subjects of Medicines, Mathematics, and Literature from Arabic language to English.

Digi Locker

- A secure dedicated personal electronic space for storing the documents of resident Indian citizens will be created
- It is to provide citizens a shareable private space on a public cloud
- The space can be utilized for storing personal documents like University certificates, PAN cards, voter id cards, etc., and the URI's of the e-documents issued by various issuer departments.
- It is a platform for issuance and verification of documents & certificates in a digital way, thus eliminating the use of physical documents.
- There is also an associated facility for e-signing documents.

Gramin Krishi Mausam Seva (GKMS)

- The scheme is implemented by India Meteorological Department in collaboration with State Agricultural Universities /Indian Council of Agricultural Research etc.
- It issues crop and location specific weather based agro advisories for the benefit of farming community
- The information is transmitted through multimedia channels and SMS to help farmers plan farm operations accordingly

Digital India

- It is a programme to transform India into digital empowered society and knowledge economy.
- The scheme is coordinated by the department of Electronics and IT and implemented by all government departments
- The scheme is to be monitored by a Digital India committee comprised of several ministers
- Digital India has three core component
    1) The creation of digital infrastructure
    2) Delivering services digitally
    3) Digital literacy
- The Key points of Digital India Programme are:
- Universal Access to Phones

Modified Special Incentive Package Scheme (M-SIPS)

- The scheme aims to provide a special incentive package to boost domestic electronic product manufacturing sector and move towards goal of Net Zero imports' in electronics by 2020.
- It promotes large scale manufacturing in the Electronics System Design and Manufacturing (ESDM) sector by
    1) Providing subsidy for capital expenditure upto 20% for investment in SEZ and 25% in non-SEZs
    2) Providing reimbursement of duties and central taxes for projects with high capital investments
- The incentives will be available for investments made within 5 years from the date of approval of the project
- Unit receiving incentive will provide undertaking to remain in commercial production for at least 3 years

5. GENERAL KNOWLEDGE

Mumbai's Victorian and Art Deco buildings get World Heritage tag

- It will be India's 37th World Heritage site
- The city has Art Deco buildings of the 20th century

About World heritage site:

- A World Heritage site is a landmark or area which is selected by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as having cultural, historical, scientific or other form of significance.
- Legally protected by international treaties.

Nanotechnology in pesticide delivery

The pesticide harpin has inability to spread into plants. This was overcome by encapsulating harpin in chitosan nanoparticles

Chitosan nanoparticles

- It is either partially or fully deacetylated chitin.
- chitin occurs naturally

- chitosan is a fully biodegradable and biocompatible natural polymer
- It can be used as an adhesive and as an antibacterial and antifungal agent.

Bioavailability

Is the proportion of a drug or other substance which enters the circulation when introduced into the body and so is able to have an active effect.

Agni-V

India's longest-range ballistic missile, Agni-V, will be inducted into the nuclear arsenal.

Key Facts:

- The Intermediate Range Ballistic Missile (IRBM) has a range of over 5,000 km
- The missile features the latest technologies for navigation and improved accuracy.
- It carries Multiple Independently Targetable Reentry Vehicles (MIRV) payloads.
- A single MIRV equipped missile that can deliver multiple warheads at different targets.

About Agni series:

- India has inducted three Agni series strategic missiles - Agni-I (700 km), Agni-II (2,000 km) ,Agni-III (3,000 km), Agni-IV (4,000 km)

West Bengal renames itself as 'Bangla'

The West Bengal Assembly passed a resolution to change the name of the State as 'Bangla' in three languages — Bengali, English and Hindi.

The procedure:

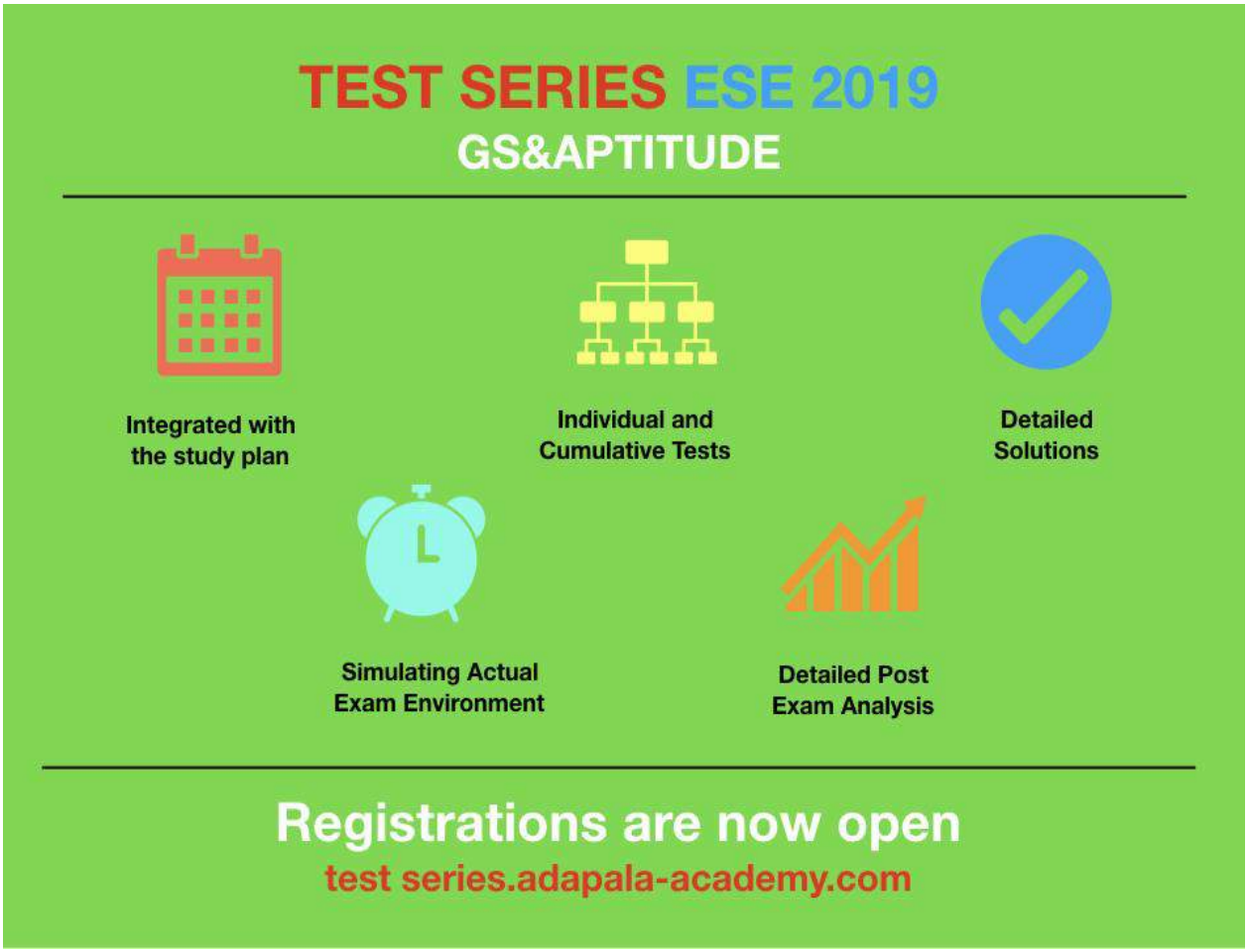
- It requires an amendment to the Schedule 1 of the Constitution
- A Constitution Amendment Bill will be introduced in Parliament, which has to approve it with a simple majority
- Change of name will be official after president gives his assent to the bill.

Ramon Magsaysay Awards-2018

- Sonam Wangchuk, and educational reformer from Ladakh, is one of two Indians named for the 2018 Ramon Magsaysay Awards.
- Bharat Vatwani, a psychiatrist who works for mentally ill street people in Mumbai is the second person.

About award:

- It is an annual award established to perpetuate former Philippine President Ramon Magsaysay's example of integrity in governance, courageous service to the people, and pragmatic idealism within a democratic society.



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