

GIS SCORE

An Institute for Civil Services



1st - 15th December, 2018

CONTENTS

PIB (16-30 November, 2018)

Sr. No.	Area	Topics	Page No.
1	Culture	19 th Hornbill Festival	04
2	Science & Technology	Digital Sky Platform	04
3	Governance	Increased procurement of pulses and oilseeds	05
4	Polity	The first Swadesh Darshan Project	07
5	Science & Technology	GSAT-11	07
6	Economy	World Customs Organization's (WCO) Meeting	08
7	Indian Economy	Agriculture Export Policy, 2018	09
8	Governance	National Mission on Interdisciplinary Cyber-Physical Systems (CPS)	10
9	International Relations	Conference on Sustainable Water Management	11
10	Defence	Agni V	13
11	International Relations	Streamlining of National Pension System (NPS)	14
12	Health	India Day	15
13	Infrastructure	The Port Community System 'PCS1x'	16
14	Governance	Space Activities Bill	17
15	Agriculture	Implementation of Swaminathan Committee Report	18
16	Defence	Deep Sea Submarine Rescue System	19
17	Indian Economy	Contribution of various sectors to GDP	20
18	Polity	FAME-India Scheme	21

1 19th Hornbill Festival

CONTEXT

Union Home Minister inaugurated 19th Hornbill Festival in Kohima. The annual Hornbill Festival is a spectacular event showcasing the rich ancient cultural diversity and civilizational unity of the people of Nagaland.

ABOUT

- The fest aims to display rich traditions and vibrant culture of Nagaland through colourful performances, crafts, sports, food fairs, games and ceremonies.
- The Government of Nagaland organizes the Hornbill Festival every year in the first week of December to encourage inter-tribal interaction and to promote cultural heritage of Nagaland. The first festival was held in 2000.
- The festival is named after the Indian hornbill, large and colourful forest bird which is displayed in the folklore of most of the state's tribes.
- The state of Nagaland is home to several tribes, which have their own distinct festivals. More than 60% of the population of Nagaland depends on agriculture and therefore most of their festivals revolve around agriculture. The Nagas consider their festivals sacred, so participation in these festivals is essential.

Important festivals of North East:

Assam	Ambubasi festival, Bohag Bihu, Baishagu festival, Majuli festival, Dehing Patkai festival, Pragjyothi dance festival
Manipur	Yaoshang, Chavang Kut
Meghalaya	Nongkrem Dance Festival, Wangala Festival, Bob Dylan festival, Ahaia festival
Mizoram	ChapcharKut Festival
Nagaland	Hornbill Festival, Moatsu festival
Sikkim	Saga Dawa
Tripura	Kharchi Puja
Arunachal Pradesh	Solung, Losar Festival, Murung, Reh, Mopin, Boori Boot, Monpa festival

2 Digital Sky Platform

CONTEXT

- In August 2018, India had announced the release of its Civil Aviation Regulations (CAR) to enable safe flying of drones in India.
- The CAR detailed the obligations of operators, remote pilots/ users and manufacturers for safe operations of RPAS and co-operative use of airspace.

ABOUT

- Remotely Piloted Aerial Systems (RPAS), popularly referred to as drones, are a technology platform with wide-ranging applications.
- To get permissions to fly, RPAS operators or remote pilots will have to file a flight plan.
- Under the new regulations, the Aviation Ministry has divided the airspace into three zones, the locations of which will be announced soon.
- The zones are
 - **Green Zone** (automatic permission): Flying in this zone will require intimation of the time and location of the flights through the digital sky portal the app.
 - **Yellow Zone** (controlled airspace): Permissions will be required for flying in this zone.
 - **Red Zone** (flying not permitted): No drones will be allowed to operate in this zone.
- The permissions to operate or fly the drones, if granted, will be available digitally on the portal.
- Why such initiative was needed?
- A few businesses have managed to manufacture or operate drones in India, without attracting hostile government attention. They provided products and services primarily for the cinematography, agriculture, and infrastructure sectors.
- However, there were no regulations in place that guarantee the legality of their products and services.
- So it has been difficult for these businesses to attract investors, limiting their ability to grow.
- It is also to be noted that India has no indigenous drone manufacturer capable of competing on the global stage.
- So the national policy on drone would go a long way in addressing these concerns.

Digital Sky Platform

- It is the first-of-its-kind national unmanned traffic management (UTM) platform that implements "no permission, no take-off" (NPNT).
- The platform has been built to evolve with the evolving needs of this rapidly changing industry. Its users will be required to do a one-time registration of their drones, pilots and owners.
- For every flight (except for the Nano category), the users will be required to ask for permission to fly on a mobile app and an automated process will permit or deny the request instantly.
- To prevent unauthorised flights and to ensure public safety, any drone without a digital permit to fly will simply not be able to take off.
- The UTM operates as a traffic regulator in the drone airspace and coordinates closely with the defence and civilian air traffic controllers (ATCs) to ensure that drones remain on the approved flight paths.

3

Increased procurement of pulses and oilseeds

CONTEXT

The country has reported production of 25.23 million tonnes of pulses during 2017-18, an increase of 72.10% from 2009-10, and production of oilseeds has increased by 25.80% for the same period.

ABOUT

- Government has undertaken various interventions to boost the pulse and oilseeds production during last four and a half years to achieve self-sufficiency in the country.
- The GOI has supported the growers with record procurement of pulses at Minimum Support Price (MSP). Further, the GOI's decision to create buffer stock of pulses has also led to the increase of pulses production in the country.
- The bold step to raise MSP to 1.5 times of cost of production undertaken this year will further encourage the farmers to grow more pulses and oilseeds. Notably, the MSP of Moong has increased from Rs. 4500 per quintal in 2013-14 to Rs. 6979 in 2018-19. Similarly for Urad from Rs. 4300 to Rs. 5600 per quintal and for Sunflower from Rs. 3700 to Rs. 5388 per quintal.
- More than 54 lakh farmers benefitted from the procurement of pulses and oilseeds during this period indicating that on an average a farmer was benefitted to the extent of approximately Rs. 80,000 by this MSP procurement.
- The procurement of pulses and oilseeds has increased by almost 13 times during the year 2014 till date as compared to the procurement done from 2009-2014.
- The recently launched Umbrella Scheme "Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) provides for a holistic arrangement for assurance of a remunerative and stable price environment for growers /farmers to increase agriculture production and productivity.
- This Umbrella Scheme comprises Price Support Scheme (PSS) for pulses & oilseeds, Price Deficiency Payment Scheme (PDPS) & Pilot of Private Procurement & Stockist Scheme (PPSS) for oilseeds to ensure MSP to the farmers.

Pulses

- ▶ Pulses are a type of leguminous crop harvested for its dry seeds. Common examples include beans, lentils and peas.
- ▶ Pulses grown in rainy season- green gram, black gram, pigeon pea and cowpea
- ▶ Pulses grown in winter season- chick pea, lentil, lathyrus, field pea and kidney bean
- ▶ Grown in both spring and rainy season- green gram, black gram and cowpea
- ▶ Main pulse growing areas are Madhya Pradesh, Uttar Pradesh, Gujarat, Maharashtra, Karnataka and Rajasthan. Madhya Pradesh is the leading state in India in terms of cultivated area and productivity of pulse.

Benefits

- ▶ **To Farmers:**
 - Nitrogen fixing properties improve the soil fertility, reduces cost of artificial fertilizers, and prevents resultant soil pollution.
 - Pulses are water efficient crops and can be cultivated in arid and poor soil.
 - These can be stored for months without losing nutritional value or selling price.
 - Their crop residue can be used as animal fodder to improve the quality of milk.
 - Pulses improve income security and nutritional security of a peasant family.
- ▶ **To Consumers:**
 - If we calculate the per gm protein cost against non-vegetarian food, pulses are highly nutritious yet cheap source of protein, particularly for the poor strata of the society.
 - These contain zero cholesterol, and high in dietary fiber.
 - Its gluten free property makes it useful for celiac patients.
 - It has low glycemic index [high in complex carbohydrates] which increases satiety and helps stabilizing blood sugar.

► **To Nature:**

- High level of genetic diversity, and climate resilient varieties can be created as per local requirements.
- Lower emission of greenhouse gases (GHG) compared to meat industry.
- It helps in sustainable agriculture practices such as intercropping, crop rotation and agro forestry. Thus, pulses improve soil carbon sequestration and farm biodiversity.

4 The first Swadesh Darshan Project

CONTEXT:

The first Swadesh Darshan Project is being implemented in the state of Nagaland. It is under the Swadesh Darshan Scheme of Ministry of Tourism, Government of India.

ABOUT:

- “Development of Tribal Circuit: Peren-Kohima-Wokha Project” was inaugurated under Swadesh Darshan Scheme.
- The project “Development of Tribal Circuit: Peren-Kohima-Wokha” was sanctioned by the Ministry of Tourism in November 2015 . Under the project, the Ministry has developed facilities like Tribal Tourist Village, Eco Log Huts, Open Air Theatre, Tribal Rejuvenation Centre, Cafeteria, Helipad, Tourist Interpretation Centre, Wayside Amenities, Last Mile Connectivity, Public Conveniences, Multipurpose Hall, Nature Trails, Trekking Routes etc.
- In addition to the above project, the Ministry has sanctioned another project in Nagaland “Development of Tribal circuit: Mokokchung–Tuensang-Mon” . The implementation of the project is in progress.

Swadesh Darshan scheme

- It is one among the flagship schemes of the Ministry of Tourism for development of thematic circuits in the country in a planned and prioritised manner.
- It focuses on development of quality infrastructure in the country with objective of providing better experience and facilities to the visitors on one hand and on other hand fostering the economic growth.
- The scheme was launched in 2014 -15 and 13 thematic circuits have been identified for development. They are Buddhist Circuit, North-East India Circuit, Coastal Circuit, Himalayan Circuit, Krishna Circuit, Desert Circuit, Eco Circuit, Wildlife Circuit, Tribal Circuit, Rural Circuit, Spiritual Circuit, Ramayana Circuit and Heritage Circuit.

5 GSAT-11

CONTEXT

Indian Space Research Organisation’s (ISRO) heaviest and most-advanced high throughput communication satellite GSAT-11 was successfully launched from the Spaceport in French Guiana.

ABOUT

- The 5,854-kg GSAT-11 will provide high data rate connectivity to users of Indian mainland and islands through 32 user beams in Ku-band and 8 hub beams in Ka-band.

- GSAT-11 will boost the broadband connectivity to rural and inaccessible Gram Panchayats in the country coming under the Bharat Net Project, which is part of Digital India Programme.
- The Bharat Net Project aims to enhance the public welfare schemes like e-banking, e-health, e-governance among others.
- GSAT-11 will act as a forerunner to all future high throughput communication satellites.
- GSAT-11 will be positioned at 74-degree east longitude in the geostationary orbit.
- Subsequently, the two solar arrays and four antenna reflectors of GSAT-11 will be deployed in orbit. The satellite will be operational after the successful completion of all in-orbit tests.

Bharat Net Project

- ▶ It seeks to connect all of India's households, particularly in rural areas, through broadband, forming the backbone of the government's ambitious Digital India programme.
- ▶ It is Union Government's ambitious rural internet connectivity programme, implemented by Bharat Broadband Network Limited (BBNL).
- ▶ Earlier National Optical Fibre Network or NOFN failed due to slow implementation. NOFN is now rebranded as BharatNet.
- ▶ At present, a special purpose vehicle, Bharat Broadband Network Ltd (BBNL), under the telecom ministry is handling the roll out of optical fibre network. The project is being executed by BSNL, Railtel and Power Grid.
- ▶ It is world's largest rural broadband connectivity programme using optical fibre.
- ▶ The project is being funded by Universal Service Obligation Fund (USOF).
- ▶ BharatNet project is being implemented in three phases:
 - ▶ First phase- one lakh gram panchayats would be provided connectivity by laying underground optic fibre cable (OFC) lines.
 - ▶ Second phase- connectivity will be provided to all 2, 50,500 gram panchayats.
 - ▶ Third phase- state-of-the-art and future-proof network, including fibre among districts and blocks would be created.

6

World Customs Organization's (WCO) Meeting

CONTEXT

Three days meeting of the 80th Session of the Policy Commission of WCO was concluded in Mumbai.

ABOUT

- During the Session, the officials from the WCO presented the work being done in WCO on various areas. This included the discussion on Strategic Plan (2019-2022) of WCO to carry forward their work on trade facilitation, revenue collection, protection of society and capacity building.
- Member countries exchanged their experiences and best practices in different areas of cross border trade.
- Major issues discussed:
 - Menace of illicit financial flows, including Trade Based Money Laundering and ways to control them;
 - Small Island Economies and how to bring them in the mainstream of the supply chain and Free Trade Zones.

World Customs Organization (WCO)

- ▶ It was established in 1952, headquartered in Brussels, Belgium.
- ▶ It is noted for its work in areas covering the development of international conventions, instruments, and tools on topics such as commodity classification, valuation, rules of origin, collection of customs revenue, supply chain security, international trade facilitation, customs enforcement activities, combating counterfeiting in support of Intellectual Property Rights (IPR), drugs enforcement, illegal weapons trading, integrity promotion, and delivering sustainable capacity building to assist with customs reforms and modernization.
- ▶ The WCO maintains the international Harmonized System (HS) goods nomenclature, and administers the technical aspects of the World Trade Organization (WTO) Agreements on Customs Valuation and Rules of Origin.
- ▶ The WCO's primary objective is to enhance the efficiency and effectiveness of member customs administrations, thereby assisting them to contribute successfully to national development goals, particularly revenue collection, national security, trade facilitation, community protection, and collection of trade statistics.
- ▶ India has become the vice-chair (regional head) of the Asia Pacific region of the World Customs Organisation (WCO) for a period of two years to June, 2020.
- ▶ The organisation has divided its membership into six regions. Each of the regions is represented by an elected vice-chairperson to the WCO council.

7 Agriculture Export Policy, 2018

CONTEXT

- The Union Cabinet chaired by Prime Minister has approved the Agriculture Export Policy, 2018.
- The Cabinet has also approved the proposal for establishment of Monitoring Framework at Centre with Commerce as the nodal Department with representation from various line Ministries/ Departments and Agencies and representatives of concerned State Governments, to oversee the implementation of Agriculture Export Policy.

OBJECTIVES

- The vision is "to Harness export potential of Indian agriculture, through suitable policy instruments, to make India global power in agriculture and raise farmers' income."
- To double agricultural exports from present ~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022 and reach US\$ 100 Billion in the next few years thereafter, with a stable trade policy regime.
- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.
- The recommendations in the Agriculture Export Policy have been organised in two categories – Strategic and Operational – as detailed below:

Strategic	Policy measures
	Infrastructure and logistics support
	Holistic approach to boost exports
	Greater involvement of State Governments in agri exports
	Focus on Clusters
	Promoting value-added exports
	Marketing and promotion of "Brand India"
Operational	Attract private investments into production and processing
	Establishment of strong quality regimen
	Research & Development
	Miscellaneous

8

National Mission on Interdisciplinary Cyber-Physical Systems (CPS)

CONTEXT

- The Union Cabinet chaired by Prime Minister has approved the launching of National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to be implemented by Department of Science & Technology for a period of five years.
- 15 Technology Innovation Hubs, six Application Innovation Hubs and four Technology translation Research Hubs to be set up

DETAILS

- The Mission addresses the ever increasing technological requirements of the society, and takes into account the international trends and road maps of leading countries for the next generation technologies. The mission implementation would develop and bring:
 - Cyber Physical Systems (CPS) and associated technologies within reach in the country,
 - adoption of CPS technologies to address India specific National / Regional issues,
 - produce Next Generation skilled manpower in CPS,
 - catalyze Translational Research,
 - accelerate entrepreneurship and start-up ecosystem development in CPS,
 - give impetus to advanced research in CPS, Technology development and higher education in science, Technology and Engineering disciplines, and
 - places India at par with other advanced countries and derive several direct and indirect benefits.

Impact:

- CPS technologies provide a cutting edge to a Nation's scientific, engineering, and technological innovative capabilities; support other missions of the government, provide industrial and economic competitiveness and have truly become a Strategic Resource.

- Volume, scale and complexity of emerging applications demand continued evolution of new technologies for the foreseeable future.
- The proposed mission would act as an engine of growth that would benefit national initiatives in health, education, energy, environment, agriculture, strategic cum security, and industrial sectors, Industry 4.0, SMART Cities, Sustainable Development Goals (SDGs) etc.
- CPS is an integrated system of upcoming technology, which in turn is being taken up on priority basis by countries in the race for development. CPS will indeed bring a paradigm shift in entire skill sets requirement.
- The job opportunities will be enhanced through the mission by imparting advanced skills and generating skilled manpower as per the requirement of the industry/ society. As Innovation, Entrepreneurship and Start-up Ecosystem is an integral part of the proposed NM-ICPS, the start-ups will also create a number of technology driven job opportunities in CPS and allied areas.

Benefits:

- The mission will feed the Central Ministries/ Departments and State Governments and also the industry to effectively use the CPS technologies in their projects and schemes for the benefit of the society.
- NM-ICPS is a Pan India Mission and covers entire gamut of India that includes Central Ministries, State Governments, Industry and Academia.

Cyber-Physical System (CPS)

- ▶ It is a mechanism that is controlled or monitored by computer-based algorithms, tightly integrated with the Internet and its users.
- ▶ In cyber-physical systems, physical and software components are deeply intertwined, each operating on different spatial and temporal scales, exhibiting multiple and distinct behavioral modalities, and interacting with each other in a lot of ways that change with context.
- ▶ Examples of CPS include smart grid, autonomous automobile systems, medical monitoring, process control systems, robotics systems, and automatic pilot avionics.
- ▶ CPS involves transdisciplinary approaches, merging theory of cybernetics, mechatronics, and design and process science. The process control is often referred to as embedded systems.
- ▶ CPS is also similar to the Internet of Things (IoT), sharing the same basic architecture; nevertheless, CPS presents a higher combination and coordination between physical and computational elements.
- ▶ Precursors of cyber-physical systems can be found in areas as diverse as aerospace, automotive, chemical processes, civil infrastructure, energy, healthcare, manufacturing, transportation, entertainment, and consumer appliances.

9

Conference on Sustainable Water Management

CONTEXT

- First International Conference on Sustainable Water Management held at Mohali on 10-11 December, 2018.

ABOUT

- The main aim is to bring advancement in water management system to further reduce flood and

draughts all over the Globe.

- To foster the participation of and dialogue among various stakeholders, including governments, the scientific and academic communities, so as to promote sustainable policies for water management.
- To create awareness of water-related problems, motivate commitment at the highest level for their solution and thus promote better management of water resources at local, regional, national and international levels.
- A number of Experts & Delegates from reputed organisations from both within India and from other countries like Australia, United Kingdom, USA, Spain, Netherlands, Republic of Korea, Canada, Germany, Sri Lanka etc. took part in the event to deliver their experience and expertise in the use of state of art technology to the stakeholders for sustainable development of water resources.
- About 20 companies and organizations had put up stalls in exhibition to show case their activities in the area of sustainable water resources management.

Water Crisis in India:

- A Water Aid report in 2016 ranked India among the worst countries in the world for the number of people without safe water.
- An estimated 76 million people in India have no access to a safe water supply.
- The Asian Development Bank has forecast that by 2030, India will have a water deficit of 50 per cent.
- The Union Ministry of Water Resources has estimated the country's current water requirements to be around 1100 billion cubic metres per year, which is estimated to be around 1200 billion cubic metres for the year 2025 and 1447 billion cubic metres for the year 2050.
- With a projected population growth of 1.4 billion people by 2050, the total available water resources would barely match the total water requirement of the country.
- With an estimated per capita availability of 1,588 cu m/capita/year (CWC, 2010), India does not fall under the category of a water scarce country per se, rather it can be termed as a country under 'water stress'. But it is widely believed that an aggregate estimation does not reveal the actual scenario.
- According to the UN World Water Development Report (2018), central India is staring at deepening water scarcity, meaning withdrawal of 40% of the renewable surface water resources.
- While ground water resources will face even greater pressure in north India, south and central India will experience high levels of risk from poor water quality in its river basins by 2050.

Sustainable water techniques/ programmes in India

- ▶ **Watershed management:** It is the process of guiding and organizing the use of land and other resources in a watershed to provide desired goods and services without adversely affecting soil and water resources. Each project under the programme is a micro-level effort to achieve this objective by treating the under productive or unproductive land and taking up allied activities for the benefit of the landless. The programmes adopt a common strategy of multi resource management involving all stakeholders within the watershed who, together as a group, co-operatively identify the resource issues and concerns of the watershed as well as develop and implement a watershed plan with solutions that are environmentally, socially and economically sustainable.
- ▶ **Rainwater harvesting:** It is the accumulation and storage of rainwater for reuse on-site, rather than allowing it to run off. Rainwater can be collected from rivers or roofs, and in many places, the water collected is redirected to a deep pit (well, shaft, or borehole), a reservoir with percolation, or collected from dew or fog with nets or other tools. Its uses include water for

gardens, livestock, irrigation, domestic use with proper treatment, indoor heating for houses, etc. The harvested water can also be used as drinking water, longer-term storage, and for other purposes such as groundwater recharge.

- ▶ **Neeranchal Watershed Program:** It is being implemented by the Union Ministry of Rural Development over a six-year period (2016-21) to achieve objectives of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). It is a World Bank assisted National Watershed Management Project and designed to further strengthen and provide technical assistance to the Watershed Component of PMKSY, in particular and all components of PMKSY, in general, to enhance its delivery capacity.
- ▶ **Prime Minister Krishi Sinchayee Yojna (Watershed Development Component) (WDC-PMKSY):** The main objectives of the WDC-PMKSY are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. The outcomes are prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables multi-cropping and the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area.

10 Agni V

CONTEXT

- Agni V, a long-range surface-to-surface Nuclear Capable Ballistic missile, was successfully launched from a canister on a road mobile launcher at the Dr Abdul Kalam Island off the coast of Odisha.

ABOUT

- The launch operations were carried out and monitored by the Strategic Forces Command (SFC) in presence of Scientists from Defence Research and Development Organisation (DRDO) and other associated officials.
- All the mission objectives were successfully achieved. This launch comes after a series of successful launches of the missile.
- It further strengthens the country's deterrence capability, which has been developed indigenously by assiduous efforts of scientists.

Missiles in India

- **Prithvi:** It is a tactical surface-to-surface short-range ballistic missile (SRBM) developed by DRDO of India under the Integrated Guided Missile Development Program (IGMDP). It is deployed by India's Strategic Forces Command.
- **Agni:** The Agni missile is a family of medium to intercontinental range ballistic missiles, named after one of the five elements of nature. Agni missiles are long range, nuclear weapons capable surface to surface ballistic missile.
- **Aakash:** It is a medium-range mobile surface-to-air missile defence system developed by the Defence Research and Development Organisation (DRDO), Ordnance Factories Board and Bharat Electronics Limited (BEL). The missile system can target aircraft up to 30 km away, at altitudes up to 18,000 m.
- **Trishul:** It is a short range surface-to-air missile. The range of the missile is 12 km and is fitted with a 15 kg warhead. The weight of the missile is 130 kg.
- **Nag:** It is India's third generation "Fire-and-forget" anti-tank missile. It is all weather, top attack missile with a range of 3 to 7 km. Nag uses Imaging Infra-Red (IIR) guidance with day and night

capability. It can be mounted on an infantry vehicle; a helicopter launched version will also be available with integration work being carried out with the HAL Dhruv.

- **BrahMos:** It is a short range ramjet supersonic cruise missile that can be launched from submarines, ships, aircraft or land. It is a joint venture between the Russia and India who have together formed BrahMos Aerospace Private Limited. It is the world's fastest cruise missile in operation. The missile travels at speeds of Mach 2.8 to 3.0 and has a maximum range of 290 km.
- **Nirbhay:** It is an all-weather low-cost long-range nuclear warhead capable cruise missile with stealth and high accuracy. The missile has a range of more than 1000 km. It weighs about one tonne and has a length of 6 metres.
- **Astra:** It is an active radar homing beyond-visual-range air-to-air missile (BVRAAM). Astra is designed to be capable of engaging targets at varying range and altitudes allowing for engagement of both short-range targets (up to 20 km) and long-range targets (up to 80 km) using alternative propulsion modes.

Table 1 – Key characteristics of ballistic and cruise missiles

Characteristics	Ballistic missiles	Cruise missiles
Range	From low to very high <i>Up to 15 000 km</i>	Mostly around 1 000 km <i>Up to 4 000 km</i>
Altitude	High <i>Easily detectable</i>	Low <i>Hard to detect</i>
Precision	Low – around a few hundred metres <i>Fit for large targets</i>	High – a few metres <i>Fit for small and mobile targets</i>
Speed	Up to 25 000 km/h at impact <i>Very hard to intercept</i>	Around 1 000 km/h <i>Possibility to intercept</i>

Data source: EPRS.

11

Streamlining of National Pension System (NPS)

CONTEXT

- The Union Cabinet has approved proposal for streamlining the National Pension System (NPS).

ABOUT

Decisions taken by the cabinet:

- Enhancement of the mandatory contribution by the Central Government for its employees covered under NPS Tier-I from the existing 10% to 14%.
- Providing freedom of choice for selection of Pension Funds and pattern of investment to central government employees.
- Payment of compensation for non-deposit or delayed deposit of NPS contributions during 2004-2012.
- Tax exemption limit for lump sum withdrawal on exit has been enhanced to 60%. With this, the entire withdrawal will now be exempted from income tax. (At present, 40% of the total accumulated corpus utilized for purchase of annuity is already tax exempted. Out of 60% of the accumulated corpus withdrawn by the NPS subscriber at the time of retirement, 40% is tax exempted and balance 20% is taxable).
- Contribution by the Government employees under Tier-II of NPS will now be covered under Section 80 C for deduction up to Rs. 1.50 lakh for the purpose of income tax at par with the other schemes

such as General Provident Fund, Contributory Provident Fund, Employees Provident Fund and Public Provident Fund provided that there is a lock-in period of 3 years.

Major impact

- Increase in the eventual accumulated corpus of all central government employees covered under NPS.
- Greater pension payouts after retirement without any additional burden on the employee.
- Freedom of choice for selection of Pension Funds and investment pattern to central government employees.
- Benefit to approximately 18 lakh central government employees covered under NPS.
- Augmenting old-age security in a time of rising life expectancy.
- By making NPS more attractive, government will be facilitated in attracting and retaining the best talent.

Background

- ▶ The new entrants to the central government service on or after 01.01.2004 are covered under the National Pension System (NPS). NPS is being implemented and regulated by Pension Fund Regulatory and Development Authority in the country.
- ▶ The Seventh Pay Commission (7th CPC), during its deliberations, examined certain concerns regarding NPS and made recommendations in the year 2015.
- ▶ The 7th CPC recommended for setting up of a Committee of Secretaries in this regard. Accordingly, a Committee of Secretaries was constituted by the Government to suggest measures for streamlining the implementation of NPS in the year 2016.
- ▶ The Committee submitted its report in the year 2018. Accordingly, based on the recommendations of the Committee, draft Cabinet Note was placed before the Cabinet for its approval.

12 India Day

CONTEXT

- The 'India Day', was organized jointly by the Ministry of Health and Family Welfare, and the development partners in the run up to the Partners' Forum 2018.

ABOUT

- India Day event is aimed to reflect on the journey of the "Reproductive, Maternal, Newborn, Child, and Adolescent Health" (RMNCH+A) programme and to share and learn from the good practices and innovations implemented by different States/UTs and organisations to address various health challenges around maternal and child health in order to sustain progress on global goals.
- Besides providing a platform for expressing the vision and achievements of RMNCH+A by major stakeholders from national, state, and community, India Day also showcased the key themes through engaging formats such as film and performances to depict the lived realities of key stakeholders.
- Frontline workers, the youth and peer educators expressed their perspectives on the journey so far and the road ahead. The event's sessions—conducted under the broad themes of community-based interventions, services and systems and enablers like use of data—highlighted the interventions that have worked well in states like Uttar Pradesh and Madhya Pradesh. The RMNCH+A strategy is centred on the continuum of care approach, catering to health needs at every stage of the lifecycle.

- RMNCH+A is aligned with the Global Strategy for Women's, Children's and Adolescents' Health and its key programming tenets articulating well-defined targets to end preventable deaths, ensure health and well-being and expand enabling environments, popularly known as the Survive, Thrive and Transform approach.
- In India, maternal, child, neonatal and adolescent health gained tremendous momentum since RMNCH+A was rolled out. India's maternal mortality rate (MMR) has fallen from 556 in the year 1990 to 130 in 2014–16 (SRS data). The country's progress can be gauged from the 77% decline in MMR that it achieved during 1990–2015, compared to global decline of 44% during this period.

Schemes for Welfare of Women and Children

- ▶ **SwadharGreh Scheme:** Ministry of Women and Child Development implements it, targets the women victims of unfortunate circumstances who are in need of institutional support for rehabilitation so that they could lead their life with dignity. The Scheme envisages providing shelter, food, clothing and health as well as economic and social security for victims of difficult circumstances which includes widows, destitute women and aged women.
- ▶ **Ujjawala Scheme:** It is being implemented for prevention of trafficking and for rescue, rehabilitation, re-integration and repatriation of victims of trafficking for commercial sexual exploitation.
- ▶ **National Nutrition Mission (NNM):** It aims to achieve improvement in nutritional status of children, pregnant women and lactating mothers and reduce anaemia among children and women. It strives to reduce the level of stunting, under-nutrition, anaemia and low birth weight babies.
- ▶ **Scheme for Adolescent Girls:** It is for out of school adolescent girls aged between 11-14 years. The scheme aims at providing supplementary nutrition containing 600 calories, 18-20 grams of protein and micronutrients per beneficiary per day for 300 days in a year, motivating out of school girls to go back to formal schooling. Its non-nutrition component focuses on skill training.
- ▶ **One Stop Centre (OSC):** It is to support women affected by violence, aims to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/case management, psychosocial counselling and temporary support services.

13

The Port Community System 'PCS1x'

CONTEXT:

- Indian Ports Association Launched 'PCS 1x' to Increase Ease of Doing Business

ABOUT:

- 'PCS 1x' is a cloud based new generation technology, with user-friendly interface. This system seamlessly integrates 8 new stakeholders besides the 19 existing stakeholders from the maritime trade on a single platform.
- It offers value added services such as notification engine, workflow, mobile application, track and trace, better user interface, better security features, improved inclusion by offering dashboard for those with no IT capability.
- A unique feature of 'PCS1x' is that it can latch on to third party software which provides services to the maritime industry thereby enabling the stakeholders to access wide network of services.
- The system enables single sign on facility to provide one stop interface to all the functionalities across all stakeholders.

- This system will enable trade to have an improved communication with the customs as they have also embarked on an Application Programming Interface (API) based architecture, thereby enabling real time interaction.
- It is estimated that this feature alone will reduce by 2 days in a life of transaction. The application will have a cascading effect in reducing dwell time and overall cost of transaction.
- The platform has the potential to revolutionize maritime trade in India and bring it at par with global best practices and pave the way to improve the Ease of Doing Business world ranking and Logistics Performance Index (LPI) ranks.
- A major training and outreach program is under way to educate the stakeholders about the uses and benefits of 'PCS 1x'.
- This system is also an initiative that supports green initiatives by reducing dependency on paper.
- The web-based platform has been developed indigenously and is a part of the 'Make in India' and 'Digital India' initiatives of the.

Cloud computing

- ▶ Cloud computing is shared pool of configurable computer system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over the Internet.
- ▶ Cloud computing relies on sharing of resources to achieve coherence and economies of scale, similar to a public utility.
- ▶ Third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance.
- ▶ Cloud providers typically use a "pay-as-you-go" model, which can lead to unexpected operating expenses if administrators are not familiarized with cloud-pricing models.
- ▶ The availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware virtualization, service-oriented architecture, and autonomic and utility computing has led to growth in cloud computing.

14 Space Activities Bill

CONTEXT

- The Government has invited suggestions from the public or stakeholders regarding the draft Space Activities Bill, 2017.

ABOUT

- The objective of the Space Bill is to facilitate the overall growth of the space activities in India with higher order of participation of public/ non-governmental/ private sector stakeholders.
- The Bill provides for establishment of a regulatory mechanism through an appropriate body, by the Central Government for the purpose of authorization and licensing of space activities.
- The provision on liability for damages caused by space activities of licensee, provides for a risk sharing mechanism, by which the central Government may determine the quantum of liability to be borne by the licensee.
- The provisions of the Bill are applicable to all Indian citizens and to those sectors which are engaged in space activity either inside or outside the country.
- It provides for the grant of non-transferable licence to those people engaged in commercial space activity.

- It provides for the appropriate mechanisms for licensing, eligibility criteria, and fee for licence.
- It will provide for the maintenance of a register for all space objects by the union government. Space objects here are those objects launched or likely to be launched around the earth.
- The new Bill provide for professional and technical support for carrying out commercial space activity.
- The provisions in the Bill will ensure safety requirements and supervise every space activity in India.
- The Bill contains provisions for the investigation of accidents in connection with the operation of a space activity.
- The Bill has provisions for sharing of details about the pricing of products created by space activity & technology with any person/agency in a prescribed manner.

The Indian space program

- ▶ The Indian space program has its genesis in 1962 when the National Committee for Space Research (INCOSPAR) was established with Vikram Sarabhai playing a pivotal role. INCOSPAR became the Indian Space Research Organisation (ISRO) in 1969.
- ▶ **Thumba Equatorial Rocket Launching Station (TERLS):** It is located in Thumba, Thiruvananthapuram which is near the southern tip of mainland India, very close to earth's magnetic equator. It is currently used by ISRO for launching sounding rockets.
- ▶ **The Vikram Sarabhai Space Centre (VSSC):** TERLS was renamed as the Vikram Sarabhai Space Centre post the sudden demise of Vikram Sarabhai in 1971. It has gradually developed into one of the main research and development establishments within ISRO.
- ▶ **Satish Dhawan Space Centre (SDSC), Sriharikota:** Formerly known as the Sriharikota High Altitude Range (SHAR) ,was renamed in 2002. Sriharikota is a barrier island off the Bay of Bengal coast located in Andhra Pradesh.
- ▶ **Aryabhata:** ISRO built India's first satellite, Aryabhata, launched by the Soviet Union in 1975.
- ▶ **Rohini:** Rohini was the first satellite to be placed in orbit by an Indian-made launch vehicle, SLV-3 in 1980.
- ▶ **SLV:** The Satellite Launch Vehicle(SLV)or SLV-3 was a 4-stage solid-propellant light launcher. It was intended to reach a height of 500 km and carry a payload of 40 kg.
- ▶ **ASLV:** The Augmented Satellite Launch Vehicle, usually known by its abbreviation ASLV was a 5-stage solid propellant rocket with the capability of placing a 150 kg satellite into Low Earth Orbit. It was later decommissioned.

15

Implementation of Swaminathan Committee Report

CONTEXT

- Government fixes-the Minimum Support Prices (MSPs) of various agricultural crops on the recommendations of the Commission for Agricultural Costs & Prices (CACP). These recommendations were based on Dr. M. S. Swaminathan committee's report.

ABOUT

- **National Commission on Farmers**

- The National Commission on Farmers (NCF) was constituted on November 18, 2004 under the chairmanship of Professor M.S. Swaminathan; final report was submitted on October 4, 2006.

- The reports contain suggestions to achieve the goal of “faster and more inclusive growth” as envisaged this approach to 11th Five Year Plan.
- The final report focused on the farmer distresses and the rise in farmer suicides, and recommends addressing them through a holistic national policy for farmers.

● **Recommendations**

- One of the recommendations of Commission was that MSP should be at least 50 percent, more than the weighted average cost of production. Though it was not incorporated in the National policy for Farmers 2007. However, recently Government has increased the MSP for all Kharif and Rabi crops and other commercial crops for the season 2018-19 with a return of at least 50 percent over cost of production, which was a historic decision by the Government.
- The findings and recommendations encompass issues of access to resources and social security entitlements. Distribute ceiling-surplus and waste lands; prevent diversion of prime agricultural land and forest to corporate sector for non-agricultural purposes.
- To ensure grazing rights and seasonal access to forests to tribals and pastoralists, and access to common property resources.
- To establish a National Land Use Advisory Service, which would have the capacity to link land use decisions with ecological meteorological and marketing factors on a location and season specific basis. Set up a mechanism to regulate the sale of agricultural land, based on quantum of land, nature of proposed use and category of buyer.

Commission for Agricultural Costs and Prices (CACP)

- ▶ It is an expert body which recommend minimum support prices (MSPs) to Government (CCEA) by taking into account cost of production, trends in domestic and international prices.
- ▶ It is a statutory panel under the Ministry of Agriculture.
- ▶ It makes the recommendations for MSPs for 23 kharif and Rabi crops.
- ▶ It came into existence in January 1965.
- ▶ Currently, CCEA comprises Chairman, Member Secretary, one Member (Official) and two Members (Non-Official).
- ▶ The non-official members are representatives from farming community and usually have active association with farming community.
- ▶ Its suggestions are not binding on the government.

16

Deep Sea Submarine Rescue System

CONTEXT

- Indian Navy’s first flyaway Deep Sea Submarine Rescue System was formally inducted at the Naval Dockyard, Mumbai.

ABOUT

- Acquisition of this capability is a significant and pioneering jump in the Indian Navy’s capability in deep submarine rescue.
- The Indian Navy currently operates submarines of the Sindhughosh, Shishumar, Kalvari Classes as well as nuclear powered submarines. The operating medium and the nature of operations

undertaken by submarines expose them to high degree of inherent risk. In such an eventuality, traditional methods of search and rescue at sea are ineffective for a disabled submarine.

- To overcome this capability gap the Navy has acquired a third generation, advanced Submarine Rescue System considering of a non-tethered Deep Submergence Rescue Vehicle (DSRV) and its associated equipment.
- The Deep Sea rescue system would have a global footprint and can be mobilised from the naval base at Mumbai to the nearest mobilisation port by air/land or sea to provide rapid rescue to the Submarines in distress.
- The newly acquired capability would be operated and deployed by the crew of Indian Navy's newly formed Submarine Rescue Unit (West) from its base in Mumbai.
- The Indian Navy's Deep Sea Submarine Rescue System considered to be the most advanced system currently in operation globally is capable of undertaking rescue from a disabled Submarine up to 650 m depth.
- The DSRV, which is operated by a crew of three, can rescue 14 personnel from a disabled Submarine at one time and can operate in extreme sea conditions (up to Sea State 6).
- **Why India needs DSRV:**
 - The nature of operations undertaken by submarines expose them to a high degree of inherent risk, where in case of such an eventuality, traditional methods of rescue are ineffective for a disabled submarine.
 - A need was felt in early 1980s to induct a dedicated, non-tethered DSRV to match the growing reach and depth of submarines and to provide safety to Navy personnel.
 - In 2013, a massive fire broke out on Sindhurakshak followed by a series of explosions, killing all 18 Navy personnel, including three officers.
 - The 3,000-tonne submarine sank in the South Breakwater in Mumbai's naval dockyard within hours of the incident.

Benefits for India:

- **Enhancing Capabilities:** The DSRV's acquisition is a significant and pioneering jump in the Indian Navy's capability in deep submarine rescue.
- **Joining the League:** India has now joined a league of navies, with the sovereign capability in fly away configuration to search, locate and rescue crew from a disabled submarine, after the acquisition of the system.
- So far, only the United States (US), Russia, China, UK, and Singapore have the Deep-Sea Rescue Systems in place.

17

Contribution of various sectors to GDP

CONTEXT

Central Statistics Office has released data of share of various sectors (including manufacturing and services sector) in Gross Value Added (GVA); following table shows their contribution in Gross Domestic Production:

Share of sectors in GVA at current prices (per cent)			
Sector	2015-16 (2 nd RE)	2016-17 (1 st RE)	2017-18 (PE)
Agriculture, forestry & fishing	17.7	17.9	17.1

Industry	29.8	29.3	29.1
(Of which) Manufacturing	16.8	16.8	16.7
Services	52.5	52.8	53.9

Measures taken by government:

- The Government has put in place a policy framework to create conducive business environment and improved infrastructure network.
- The Make in India initiative launched by the Government focuses on infrastructure development, simplified processes, job creation, skill development and fostering innovation in the select manufacturing sectors.
- Start-Up India initiative was launched to build a strong eco-system for nurturing innovation and to drive economic growth and generate employment opportunities.
- It has also taken up a series of measures to improve ease of doing business, which has borne results with the position of India improving from 142nd rank in 2014 to 77th rank in 2018.
- Further, the Foreign Direct Investment policy has been simplified and liberalized progressively and now most sectors are on automatic route.
- Pradhan Mantri MUDRA Yojana was launched to extend collateral free loans by banks, non-banking financial companies and micro finance institutions to small/micro business enterprises in the non-agricultural sector to individuals to enable them to setup or expand their business activities and to generate self-employment.
- In addition, the government announced special package for footwear and leather sector to develop infrastructure, facilitate additional investments, generate employment and increase production.
- A special package including a slew of labour-friendly measures to promote employment generation, economies of scale and boost exports was introduced in textile and apparel sector.
- Key initiatives have been announced recently by the Government to help growth, expansion and facilitation of Micro, Small & Medium Enterprises.

18 FAME-India Scheme

CONTEXT

In order to promote manufacturing of electric and hybrid vehicle technology and to ensure sustainable growth of the same, Department of Heavy Industry is implementing FAME-India Scheme- Phase-I [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] .

ABOUT

- The scheme was initially launched for up to 31st April 2017; has been extended up to 31st March, 2019 or till Notification of FAME-II, whichever is earlier.
- The Phase-II of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME-India) Scheme proposes to give a push to electric vehicles (EVs) in public transport and seeks to encourage adoption of EVs by way of market creation and demand aggregation.
- The draft scheme envisages the holistic growth of EV industry, including providing for charging infrastructure, research and development of EV technologies and push towards greater indigenization. The scheme has not been finalized yet.
- Since inception of the scheme, several segments have been added to the scheme so as to ensure that more people take advantage of this scheme.

- In this spirit, support to fully electric buses have been added to the scheme to support electrification of public transport.
- 100 % FDI by automatic route is permitted in the automobile sector. Further, automobile sector is in deregulated sector and both private sector and public sector are free to carry out investment in the automobile sector, including for manufacturing of Electric Vehicles and E-Buses.

FAME India Scheme

- ▶ The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) India was launched in 2015 under the National Electric Mobility Mission (NEMM) aims at promoting eco-friendly vehicles in the country. It is being administered by the Heavy Industries Ministry.
- ▶ The objective of scheme is to provide fiscal and monetary incentives for adoption and market creation of both hybrid and electric technologies vehicles in the country. It also aims at incentivising all vehicle segments, including two-wheelers, three wheeler auto, passenger four-wheeler vehicle, light commercial vehicles and buses.
- ▶ The scheme covers hybrid and electric technologies like a strong hybrid, plug-in hybrid and battery electric vehicles. Its mandate is to support hybrid or electric vehicles market development and its manufacturing eco-system in country in order to achieve self-sustenance in stipulated period.

GS SCORE

An Institute for Civil Services

Target PT 2019

Complete Revision *through* 4000⁺ MCQs

60 DAYS

Classroom
& Online
Programme

- 45 Days Concept cum Revision Classes with Daily Test
- 15 Days Prelims Current Affairs Classes + Tests
- Special Classes on Economic Survey & Budget
- Special Classes on India Year Book & Mapping
- Prelims Mock Test Series
- Prelims Study Material

Batch
Starts

10 JANUARY
2019

- Test Timings:
9:00 AM to 10:00 AM
- Class Timings:
10:00 AM onwards

Detailed Schedule Download at:



www.iasscore.in

Off. No. 6, 1st Floor, Apsara Arcade, Karol Bagh, New Delhi-5, (Karol Bagh Metro Gate No. 5)

☎ 9873245114, 9953595114 ✉ info@iasscore.in 📱 /iasscore