

General Studies-2

Samagra Shiksha Scheme

Why in News?

The Department of School Education and Literacy has formulated the Samagra Shiksha - an Integrated Scheme for School Education as a Centrally Sponsored Scheme and it is being implemented throughout the country with effect from the year 2018-19.

About the Scheme:

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

It is an overarching programme for the school education sector extending from pre-school to class XII and aims to ensure inclusive and equitable quality education at all levels of school education.

It envisages the 'school' as a continuum from pre-school, primary, upper primary, secondary to senior secondary levels.

The main emphasis of the Scheme is on improving quality of school education and the strategy for all interventions would be to enhance the Learning Outcomes at all levels of schooling.

Financial Allocation:

An allocation of Rs 75,000 crore over the period 1st April, 2018 to 31st March, 2020 has been approved which is a 20% increase over the current allocations. It sees school education holistically without segmenting it into various levels of education.

Reconstitution of National Bamboo Mission

The restructured National Bamboo Mission (NBM) has been launched this year with the approval of Cabinet Committee on Economic Affairs (CCEA) under the National Mission for Sustainable Agriculture (NMSA) for implementation.

Objectives of NBM:

To increase the area under bamboo plantation in non forest Government and private lands to supplement farm income and contribute towards resilience to climate change as well as availability of quality raw material requirement of industries.

The bamboo plantations will be promoted predominantly in farmers' fields, homesteads, community lands, arable wastelands, and along irrigation canals, water bodies etc.

ii) To improve post-harvest management through establishment of innovative primary processing units near the source of production, primary treatment and seasoning plants, preservation technologies and market infrastructure.

iii) To promote product development keeping in view market demand, by assisting R&D, entrepreneurship & business models at micro, small and medium levels and feed bigger industry.

iv) To rejuvenate the under developed bamboo industry in India.

v) To promote skill development, capacity building, awareness generation for development of bamboo sector from production to market demand.

About NMSA:

NMSA derives its mandate from Sustainable Agriculture Mission which is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC).

It aims at promoting sustainable agriculture through a series of adaptation measures focusing on ten key dimensions encompassing Indian agriculture namely;

Improved crop seeds, livestock and fish cultures', 'Water Use Efficiency', 'Pest Management', 'Improved Farm Practices', 'Nutrient Management', 'Agricultural insurance', 'Credit support', 'Markets', 'Access to Information' and 'Livelihood diversification'.

Unnat Bharat Abhiyan 2.0

Why in News?

The Government has successfully launched Unnat Bharat Abhiyan 2.0.

About UBA 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.

It is a significant initiative where all Higher Learning Institutes have been involved for participation in development activities, particularly in rural areas.

Unnat Bharat Abhiyan is inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions to help build the architecture of an Inclusive India.

Aims and Objectives:

It also aims to create a virtuous cycle between the society and an inclusive university system, with the latter providing knowledge base; practices for emerging livelihoods and to upgrade the capabilities of both the public and private sectors.

Objective of the scheme are:

(i) To engage the faculty and students of Higher Educational Institutions in understanding rural realities;
(ii) Identify and select existing innovative technologies, enable customization of technologies, or devise implementation methods for innovative solutions, as required by people;

and (iii) To allow Higher Educational Institutions to contribute to devising systems for smooth implementation of various Government Programs.

National Resource Centres (NRCs)

Why in News?

The Government has identified 75 institutions to act as National Resource Centres (NRCs) to prepare online training material for Massive Open Online Courses (MOOCs) with focus on latest developments in the discipline, new & emerging trends, pedagogical improvements and methodologies for transacting revised curriculum.

Under this initiative, all in-service teachers, irrespective of their subject and seniority have an enabling opportunity to keep abreast of the latest developments in their disciplines through the technology based online refresher course, through SWAYAM, India's own MOOCs platform.

About SWAYAM:

Under **SWAYAM** or **Study Webs of Active –Learning for Young Aspiring Minds** programme of [Ministry of Human Resource Development, Government of India](#), professors and faculties of centrally funded institutions like [IITs](#), [IIMs](#), central universities will offer online courses to citizens of [India](#).

SWAYAM is an **instrument for self-actualisation** providing opportunities for a life-long learning.

Here learner can choose from hundreds of courses , virtually every course that is taught at the university / college / school level and these shall be offered by best of the teachers in India and elsewhere.

If a student is studying in any college, he/she can transfer the credits earned by taking these courses into their academic record. If you are, working or not working, in school or out of school, SWAYAM presents a unique educational opportunity to expand the horizons of knowledge

#Childline1098' Contest- 'Spot the Logo and Suggest a Tagline'.



The Ministry of Women and Child Development has launched a contest, **#Childline1098**, inviting people to share images of the Childline 1098 logo that they spot at unique locations and send it with a tagline, to mark World Day against Trafficking in Persons on July 30.

About Childline:

CHILDLINE is India's first 24-hour, free, emergency phone service for children in need of aid and assistance.

At present, it is operational at 450 locations.

As Railways often act as carriers of trafficked children, the Ministry signed an MoU with the Ministry of Railways to rescue and rehabilitate runaway, abandoned, kidnapped and trafficked children via Railways.

The Ministry launched an awareness campaign via posters in railway coaches in November, 2015, and around 2 lakh posters have been put in trains which caution passengers about children around them who may need protection.

To familiarise children with Childline 1098, it is to be popularised through the National Council Of Educational Research and Training (NCERT) publications and screening of educational films on child sexual abuse in schools.

Based on the request, NCERT has published the information regarding Childline (1098) on the back side of the front cover of all course books from Class 6 to Class 12.

National Policy on Women's Safety

An Action Plan has been furnished by the Ministry of Women and Child Development, which covers legal and schematic interventions to enhance safety of Women having the following components:

(i) to strengthen implementation of legislations including those on prohibition of child marriage, indecent representation of women, protect women against domestic violence, POCSO, trafficking, and prevention and prohibition of sexual harassment.

(ii) implement schematic interventions including those for women to prevent violence and improve status of girl child, involving community for safe neighbourhood, setting up One-Stop Centres in each district for counselling and providing first-aid to women victims of violence, setting up universal Helpline 181, increase working women hostels, strengthen child care institutions for rehabilitation of victims of violence, and strengthen grievance redressal.

(iii) Convergence of various projects under implementation for women safety and rehabilitation under Nirbhaya scheme including, inter-alia, setting up Emergency Response Support system, Mahila Police Volunteers, Cyber-crime portal, strengthening forensic facilities, and other women safety projects for increasing public safety. Implementation of Action Plan is a continuous process.

POSHAN Abhiyaan

Why in News?

Ministry of Women and Child Development, Government of India has organized 2nd meeting of National Council on India's Nutrition Challenges under **POSHAN Abhiyaan**.

About POSHAN abhiyaan:

1. The Government of India has set-up POSHAN Abhiyaan (National Nutrition Mission) which was launched by the Hon'ble Prime Minister on 8th March, 2018 from Jhunjhunu, Rajasthan.
2. The programme through use of technology, a targeted approach and convergence strives to reduce the level of Stunting, Under-nutrition, Anemia and Low Birth Weight in Children, as also, focus on Adolescent Girls, Pregnant Women & Lactating Mothers, thus holistically addressing malnutrition
3. The Abhiyaan targets to reduce stunting, under-nutrition, anemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively. The target of the mission is to bring down stunting among children in the age group 0-6 years from 38.4% to 25% by 2022.
4. To ensure a holistic approach, all 36 States/UTs and 718 districts will be covered in a phased manner by the year 2020.
5. Never before has nutrition been given such prominence at the highest level in the country.

National Policy on Bio-Fuels

Why in News?

Union Minister of Petroleum & Natural Gas, Shri Dharmendra Pradhan has said that with the objective of ensuring adequate and sustained availability of domestic feedstock for biofuel production, increasing Farmers Income, Import Reduction, Employment Generation and Waste to Wealth Creation, the Government has notified the National Policy on Biofuels-2018.

About NPB:

The policy categorizes biofuels as "Basic Biofuels", i.e., such as bio ethanol & biodiesel and "Advanced Biofuels" such as Second Generation (2G) ethanol, bio-CNG, Third Generation Biofuels, etc. to enable extension of appropriate financial and fiscal incentives under each category.

It also includes promotion of advanced biofuels through various incentives, off-take assurance and viability gap funding.

C.A From 23rd July to 27th July 2018

With an objective of increasing production of ethanol, this Policy allows production of ethanol from damaged food grains like wheat, broken rice etc. which are unfit for human consumption.

Additionally, during an agriculture crop year, when there is projected over supply of food grains as anticipated by the Ministry of Agriculture & Farmers Welfare, the policy allows conversion of surplus quantities of food grains to ethanol, based on the approval of National Biofuel Coordination Committee.

Benefits :

Use of damaged food grains and surplus food grains for production of ethanol will increase its availability for Ethanol Blended Petrol (EBP) Programme, resulting in

- increasing the blending percentage
- increasing farmer's income
- saving of foreign exchange and addressing environmental issues.

During the ethanol supply year 2016-17, 66.5 crore litres of ethanol was blended in Petrol which resulted in foreign exchange impact of Rs. 1749 crore and carbon emission reduced to the extent of 13.23 lakh tonnes.

About EBP:

The Government through Oil Marketing Companies (OMCs), is implementing Ethanol Blended Petrol (EBP) Programme under which, OMCs sell ethanol blended petrol with ethanol blending percentage upto 10%, subject to the availability of ethanol.

The quantity of ethanol available for EBP Programme is less than the quantity required to achieve blending targets as ethanol produced in the country is also used in Potable and Chemical Sector.

In the National Policy on Biofuels – 2018, Government has allowed B-heavy molasses, sugarcane juice and damaged food grains as feedstocks to increase availability of ethanol.

Setting Up of Second Generation Ethanol Bio-Refineries

Why in News?

Union Minister of Petroleum & Natural Gas, Shri Dharmendra Pradhan has said that oil PSUs have entered into Memorandums of Understanding (MoUs) with State Governments and Technology Providers for setting up five 2G ethanol bio-refineries.

On 25.12.2016, foundation stone of Hindustan Petroleum Corporation Limited's first 2G ethanol bio-refinery in Bathinda, Punjab, has been laid.

About 2-G Ethanol:

Second-generation biofuels, also known as **advanced biofuels**, are fuels that can be manufactured from various types of non-food [biomass](#).

Biomass in this context means plant materials and animal waste used especially as a source of fuel.

First-generation [biofuels](#) are made from the [sugars](#) and [vegetable oils](#) found in food crops using standard processing technologies.

Second-generation biofuels are made from different feedstocks and therefore may require different technology to extract useful energy from them.

Second generation feedstocks include [lignocellulosic biomass](#) or woody crops, agricultural residues or waste, as well as dedicated non-food energy crops grown on marginal land unsuitable for crop production.

The term second-generation biofuels is used loosely to describe both the 'advanced' technology used to process feedstocks into biofuel, but also the use of non-food crops, biomass and wastes as feedstocks in 'standard' biofuels processing technologies if suitable.

This causes some considerable confusion. Therefore it is important to distinguish between second-generation feedstocks and second-generation biofuel processing technologies.

Concerns:

The development of second-generation biofuels has seen a stimulus since the [Food vs. fuel](#) dilemma regarding the risk of diverting farmland or crops for [biofuels](#) production to the detriment of [food supply](#).

The biofuel and [food price](#) debate involves wide-ranging views, and is a long-standing, controversial one in the literature.

“Innovate India Platform”

Shri. R Ramanan, Mission Director, Atal Innovation Mission and Shri.Arvind Gupta CEO, MyGov today launched the “#InnovateIndia Platform”, a collaboration between the Atal Innovation Mission and MyGov, a citizen centric platform of the Government of India.

About the Platform:

The #InnovateIndia portal will serve as the common point for all the innovation happening across the nation.

InnovateIndia MyGov-AIM portal creates the much-needed innovations platform for registering both grassroots and deep-tech innovators at a national level.

Those searching for a critical innovation can leverage the portal advantageously for the benefit of the economy as well as national social needs.”

Features of this platform are:

1. The platform is open to all Indian citizens
2. The users can View, comment, share, and rate the innovations crowdsourced on the #InnovateIndia platform
3. View the leaderboard which is calculated based on the votes on each innovation.
4. Citizens can share their/organizations/someone else’s innovation on the platform by login to the MyGov website
5. These innovations can also be shared on various social media platforms such as WhatsApp, Facebook, and Twitter

Benefits:

India has been a very innovation-oriented society, but our challenge has been a structured approach to innovation, capturing them and building an ecosystem to take them global.

The current government initiative to capture and support innovation from ground up, is aimed at creating a structured ecosystem to encourage, enhance and develop India's innovative character", said Shri Arvind Gupta, CEO MyGov.

With the launch of the platform Indians will be able to upload and rate their/organizations innovation on the platform.

Mahila Shakti Kendra Scheme

Government of India has approved a new scheme namely Mahila Shakti Kendra for implementation during 2017-18 upto 2019-20 to empower rural women through community participation.

About the Scheme:

The Scheme is implemented with cost sharing ratio of 60:40 between centre and states except for North East and Special Category States where the ratio is 90:10.

The scheme is envisaged to work at various levels and at the national level (domain based knowledge support) and state level (State Resource Centre for Women) technical support to the respective governments on issues related to women is provided.

Community engagement through College Student Volunteers is envisioned in 115 aspirational districts as part of the Block Level initiatives.

Student volunteers are to play an instrumental role in awareness generation regarding various important government schemes/ programmes as well as social issues.

District Level Centre for Women (DLCW) has also been envisaged for 640 districts to be covered in phased manner.

These centres 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.

Vast improvement in Human Development Indicators pertaining to Scheduled Tribes

Data pertaining to decennial census, large scale sample surveys conducted by National Sample Survey Office (NSSO) and various other surveys conducted by different Ministries / Departments of Government of India, reveal that over the years there has been vast improvement in the human development indicators pertaining to Scheduled Tribes (STs).

Major Improvements:

For example, literacy rate for STs has improved from 47.1% in 2001 to 59% in 2011.

Gross Enrolment Ratio (GER) for ST students at Senior Secondary (classes XI-XII) level has increased from 35.4% in 2013-14 to 43.1% in 2015-16.

During 2015, 64.1% and 68.9% ST students have completed Class Xth and XIIth, respectively, through various State and Central Examination Boards including Open Boards.

In respect of Scheduled Tribes, Infant Mortality Rate has declined from 62.1 (2005-06) to 44.4 (2015-16), Under Five Mortality Rate has declined from 95.7 (2005-06) to 57.2 (2015-16), and Institutional Delivery has increased from 17.7% in 2005-06 to 68.0% in 2015-16.

What is HDI?

The **Human Development Index (HDI)** is a composite statistic (composite index) of [life expectancy](#), [education](#), and [per capita income](#) indicators, which are used to rank countries into four tiers of [human development](#).

A country scores higher HDI when the [lifespan](#) is higher, the [education](#) level is higher, and the [GDP per capita](#) is higher.

The HDI was developed by Pakistani economist [Mahbub ul Haq](#) and Indian economist [Amartya Sen](#) which was further used to measure the country's development by the United Nations Development Program([UNDP](#))

Para-Athletics under Khelo India Scheme

Minister of State (Independent Charge) for Youth Affairs and Sports Col. Rajyavardhan Rathore has said that the Khelo India Scheme has a dedicated vertical, namely, “Promotion of Sports among persons with disabilities” for supporting athletes with disabilities including sportspersons for Para-athletics.

About Khelo India scheme:

The importance of sports and fitness in one’s life is invaluable. Playing sports inculcates team spirit, develops strategic & analytical thinking, leadership skills, goal setting and risk taking.

A fit and healthy individual leads to an equally healthy society and strong nation.

The Khelo India programme has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports played in our country and establish India as a great sporting nation.

General Studies- 3

Waterways Projects on Kakinada-Chennai Section of NW-4

In order to develop waterways from Kakinada to Chennai, detailed hydrographic survey has been completed by the Inland Waterways Authority of India (IWAI) in respect of Kakinada to Ennore stretch of National Waterway-4.



About NW-4

National Waterway 4 (NW-4) is a 1,095 kilometres (680 mi) long [waterway](#) in [India](#).

It has been declared as an [Indian National Waterway](#) and is currently under development.

C.A From 23rd July to 27th July 2018

It connects the Indian states of [Telangana](#), [Andhra Pradesh](#), [Tamil Nadu](#), and the [union territory](#) of [Puducherry](#).

The NW-4 runs along the [Coromandal Coast](#) through [Kakinada](#), [Eluru](#), Commanur, [Buckingham](#) Canals and also through part of [Krishna](#) and [Godavari](#) rivers in [South India](#).

It was declared a National Waterway on 24 November 2008 under the Provisions of National Waterways Bill, 2006.

It is being developed by the [Inland Waterways Authority of India](#) (IWAI), and was scheduled for completion by 2013.

The National Waterways Act, 2016 has extended the length of NW-4 from 1078 Km to 2890 Km by connecting Krishna and Godavari River

The Project would be undertaken in 3 phases with first phase beginning in October, 2017 and to be completed by June, 2019

Student Police Cadet Programme

Union Home Minister has launched Student Police Cadet Programme.

About Student Police Cadet Programme:

The programme seeks to build a bridge between the Police and the larger community through school students by inculcating values and ethics in them through classes in school and outside.

The programme focuses on students of class 8 & 9 and special care has been taken to ensure that it does not lead to increase in the workload of the students.

- The programme does not have any prescribed text book nor is any exam envisaged. Only one class in a month is proposed.
- The programme seeks to cover broadly two kinds of topics: Crime prevention and control and Values and ethics.
- The Programme shall be at first implemented in Government schools in both urban and rural areas.

Implementation:

The programme shall be steered by a State level committee to be headed by the Principal Secretary, Home Department with the Principal Secretary, Education and Director General of Police as members.

There shall be a similar committee at the district level headed by the District Magistrate with the District Inspector of Schools and Superintendent of Police as members.

System of Air Quality and Weather Forecasting (SAFAR)

Why in News?

Science & Technology, Earth Sciences; Environment, Forest & Climate Change Minister Dr Harsh Vardhan unveiled a state-of-the-art Air Quality and Weather Forecast System– SAFAR (System of Air Quality and Weather Forecasting) at Chandni Chowk in Delhi today.

The giant true colour LED display gives out real-time air quality index on 24x7 basis with colour coding along with 72-hour advance forecast.

About SAFAR:

The system, first of its kind in the country, was developed indigenously in record time by Indian Institute of Tropical Meteorology, Pune and operationalized by India Meteorological Department (IMD).

It will also measure sun's UV-Index and will provide measurement of online automatic ultrafine particles PM1 and Mercury, both of which have direct relevance to human health.

Based on UVI, skin advisories will be issued on display.

It will monitor all weather parameters like temperature, rainfall, humidity wind speed and wind direction.

In addition to regular air quality parameters like PM2.5, PM10, Sulfur Dioxide, Ozone, Nitrogen Oxides, Carbon Monoxide, the system will also monitor the existence of Benzene, Toluene and Xylene.

Benefits:

According to a preliminary economic assessment of the benefits of the system, if 5% of people suffering from air-pollution related diseases take advantage of the advisories and precautions in Delhi alone, it would result in a saving of nearly Rs. 2,500 crores in terms of health-related cost benefit,”

The system will be an integral part of India’s first Air Quality Early Warning System operational in Delhi and will strengthen the existing air quality network of SAFAR, Central Pollution Control Board and Delhi Pollution Control Committee.

SAFAR will accelerate public awareness and preparedness of air pollution and weather extremes.

It will also lead to better understanding of linkages among emissions, weather, pollution and climate.

Besides health, SAFAR system would benefit cost savings to several other sectors like agriculture, aviation, infrastructure, disaster management skill, tourism and many others, which directly or indirectly get affected by air quality and weather.

Seva Bhoj Yojna

Why in News?

The proposed total budget outlay of the scheme for the financial year 2018-19 and 2019-20 is Rs. 150.00 crores and Rs. 175.00 crores respectively.

About the Yojana:

The ‘SevaBhojYojna’ is a Central Sector Scheme under which Central Goods and Services Tax (CGST) and Central Government’s share of Integrated Goods and Services Tax (IGST) paid by Charitable Religious Institutions like Temples, Gurudwara, Dharmik Ashram, Mosques, Dargah, Church, Matth, Monastries etc. on purchase of specific raw food items shall be reimbursed to them as financial assistance by the Government of India.

These Charitable Religious Institutions should have been distributing free food in the form of 'prasad', 'langar'/bhandara (community kitchen) to at least 5000 persons in a calendar month for at least past 3 years.

Nutrient Based Subsidy and City Compost Scheme

Why in News?

Government has decided to continue Nutrient Based Subsidy and City Compost Scheme till 2019-20.

About NBS:

Under the policy, a fixed amount of subsidy, decided on annual basis, is provided on subsidised P&K fertilizers depending on their nutrient content. Under this policy, MRP is fixed by fertilizer companies as per market dynamics at reasonable level which is monitored by the Government.

Objectives of NBS Scheme are as under:

- i. To promote balanced use of fertilizers.
- ii. To reduce subsidy burden on the Government.
- iii. To improve availability of fertilizers to farmers.
- iv. To encourage competition among fertilizer companies

Objectives of City Compost Schemes are as under:

- i. To support SWACHH BHARAT MISSION.
- ii. To provide City Compost at subsidized rates to farmers.

Progress made in Artificial Embryo:

An international team of scientists has moved closer to creating artificial embryos after using mouse stem cells to make structures capable of taking a crucial step in the development of life.

Implications of Research:

Experts said the results suggested human embryos could be created in a similar way in future — a step that would allow scientists to use artificial embryos rather than real ones to research the very earliest stages of human development.

The study will help in understanding how the three stem cell types interact to enable embryo development.

And by experimentally altering biological pathways in one cell type, they should be able to see how this affects the behaviour of the other cell types.

The early stages of embryo development are when a large proportion of pregnancies are lost and yet it is a stage that we know very little about.

Review of PMFBY

Pradhan Mantri Fasal Bima Yojana (PMFBY) was introduced from Kharif 2016 season in the country.

Gathering from the scheme implementation experience review of the scheme is an ongoing process and is done in consultation with all the Stakeholders.

About the Scheme:

The scheme is optional for the States/ Union Territories (UTs) and so far, the scheme has been opted for implementation by 27 States/UTs. in one or more season(s) since inception in April, 2016 on the basis of their perception of risk to crops in their States.

The scheme provides comprehensive risk coverage from pre-sowing to post harvest losses due to non-preventable natural risks.

C.A From 23rd July to 27th July 2018

Since sum insured has been equated with Scale of Finance, the farmers are provided with maximum risk coverage and at a minimum uniform fixed premium rate payable by them i.e. maximum 2% for Kharif crops, 1.5% for Rabi Crop and 5% for annual commercial/horticultural crops.

The balance of actuarial/bidder premium to be shared by the Central and State Government on 50 : 50 basis.

Moreover, under the scheme since unit area of insurance has been lowered to village/village panchayat level for assessment of losses of major crops and to individual farm level for assessment of losses due to localised calamities of hailstorm, landslide and inundation and post-harvest losses, the assessment of losses are more realistic.

The seasonality discipline has been made more stringent thereby facilitating more prompt settlement of claims.

Further with the setting up of National Crop Insurance Portal for scheme administration not only can the farmer also enroll under the scheme directly but will be able to track the entire process of his claim settlement.

Revoking AFSPA

In view of improved security situation in Meghalaya and in certain areas of Arunachal Pradesh bordering Assam:

- i. areas under AFSPA in the districts of Arunachal Pradesh have been reduced from 16 police stations/police out post earlier to 8 police stations bordering the State of Assam besides continuing of AFSPA in Tirap, Changlang and Longding districts of Arunachal Pradesh.

The decision to issue notification for declaring 'disturbed area' under AFSPA, is taken periodically after making an objective assessment of the ground situation in consultation with security agencies and the concerned state Governments.

About AFSPA

Why in News?

Armed Forces (Special Powers) Acts (AFSPA), are [Acts](#) of the [Parliament of India](#) that grant special powers to the [Indian Armed Forces](#) in what each act terms "disturbed areas".

According to The Disturbed Areas (Special Courts) Act, 1976 once declared 'disturbed', the area has to maintain status quo for a minimum of 3 months.

According to the Armed Forces Special Powers Act (AFSPA), in an area that is proclaimed as "disturbed", an officer of the armed forces has powers to:

- After giving such due warning, Fire upon or use other kinds of force even if it causes death, against the person who is acting against law or order in the disturbed area for the maintenance of public order,
- Destroy any arms dump, hide-outs, prepared or fortified position or shelter or training camp from which armed attacks are made by the armed volunteers or armed gangs or absconders wanted for any offence.
- To arrest without a warrant anyone who has committed cognizable offences or is reasonably suspected of having done so and may use force if needed for the arrest.
- To enter and search any premise in order to make such arrests, or to recover any person wrongfully restrained or any arms, ammunition or explosive substances and seize it.
- Stop and search any vehicle or vessel reasonably suspected to be carrying such person or weapons.
- Any person arrested and taken into custody under this Act shall be made present over to the officer in charge of the nearest police station with least possible delay, together with a report of the circumstances occasioning the arrest.
- Army officers have legal immunity for their actions. There can be no prosecution, suit or any other legal proceeding against

anyone acting under that law. Nor is the government's judgment on why an area is found to be disturbed subject to judicial review.

- Protection of persons acting in good faith under this Act from prosecution, suit or other legal proceedings, except with the sanction of the Central Government, in exercise of the powers conferred by this Act.

Exercise Pitch Black – 18

An Indian Air Force contingent comprising of four Su-30 MKI, 01 X C-130 and 01 X C-17 aircraft, landed at Darwin Air Force Base, Australia today.

This is the first time that an IAF contingent is participating in a multinational air exercise in Australia with Royal Australian Air Force.

This exercise involves over 100 aircraft from around the globe and will provide a unique opportunity to the air-warriors to operate in a dynamic warlike environment.

Benefits Of Exercise to India:

As a part of Commonwealth countries, India and Australia have always enjoyed amicable bilateral relations.

Air Forces of both the countries have participated in the Second World War.

The contribution of these nations has been well documented and acknowledged by the historians.

Su-30 MKI aircraft flew across the ocean to once again demonstrate our strategic reach and professionalism. As part of military diplomacy and reassuring our neighbours of our commitment to regional peace and security, while en-route to Australia, IAF engaged with the Indonesian and Malaysian Air Forces.

After the success of recently concluded Exercise Gaganshakti-2018, IAF engagement with Indonesian and Malaysian Air Forces and

participation in the Exercise Pitch Black-18 in Australia, IAF will once again showcase it's capability to be an effective net security provider in the region.

Navigating across the ocean, precise air to air engagement with tanker aircraft and ability to operate over the international airspace reaffirms that the Indian Air Force would always play the cutting edge of our nation's military capability.

Report of Committee on Resolution of Stressed Assets suggests a Five-Pronged Approach for Stressed Assets Resolution by the Banking Industry

As per bank inputs, banks had set-up a Committee on Resolution of Stressed Assets, which has given its Report suggesting a five-pronged approach for stressed assets resolution by the banking industry in the areas of SME resolution (for which banks may put in place a Robust Monitoring Process), Bank-Led Resolution, AMC/AIF-led resolution, resolution through the Insolvency and Bankruptcy Code, and an asset trading platform.

Banks have initiated steps for taking forward the suggestions with due approvals.

A number of measures have been taken to streamline recovery and introduce innovative methods for recovery of NPAs.

- The Insolvency and Bankruptcy Code, 2016 (IBC) has been enacted to create a unified framework for resolving insolvency and bankruptcy matters.

Under this, by adopting a creditor-in-saddle approach, with the interim resolution professional taking over management of affairs of corporate debtor at the outset, the incentive to resort to abuse of the legal system has been taken away.

This, coupled with debarment of wilful defaulters and persons associated with NPA accounts from the resolution process, has effected a fundamental change in the creditor-debtor relationship.

- The Banking Regulation Act, 1949 has been amended, to provide for authorisation to RBI to issue directions to banks to initiate the insolvency resolution process under IBC.

As per RBI's directions, cases have been filed under IBC before the National Company Law Tribunal (NCLT) in respect of 39 large defaulters, amounting to about Rs. 2.69 lakh crore funded exposure (as of December 2017).

- The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 has been amended for faster recovery, with provision for three months imprisonment in case the borrower does not provide asset details and for the lender to get possession of mortgaged property within 30 days. Also, six new Debts Recovery Tribunal have been established to expedite recovery.
- In addition, under the PSB Reforms Agenda announced by the Government, PSBs have committed to clean and commercially prudent business through Stressed Asset Management Verticals for focussed recovery, rigorous due diligence and appraisal for sanction by scrutinising group balance sheets, at least 10% share in consortium lending, ring-fencing of cash flows, initiating use of technology and analytics for comprehensive due diligence across data sources.

What is 'Non-Performing Asset (NPA)?

A nonperforming asset (NPA) refers to a classification for loans or advances that are in default or are in arrears on scheduled payments of principal or interest.

In most cases, debt is classified as nonperforming when loan payments have not been made for a period of 90 days.

While 90 days of nonpayment is the standard, the amount of elapsed time may be shorter or longer depending on the terms and conditions of each loan.

Tackling Cyber Threats

At present, there are no plans to set up Cyber Warrior Police Force.

The Government is working on setting up of Indian Cyber Crime Coordination Centre (I4C).

The main objective of the I4C scheme:

to set up a national cybercrime coordination center for law enforcement agencies of States/UTs as an effective apparatus to handle issues related to cybercrime in the country.

Adequate legal framework exists in the form of Information Technology Act, 2000 along with Indian Penal Code, 1860 to deal with cyber safety and cyber-crime issues.

Further, amendment of law is an ongoing process to take care of emerging needs.

Railway Safety Fund

As announced by Minister of Finance in his Budget Speech 2017-18, a Fund namely 'Rashtriya Rail Sanraksha Kosh' has been introduced in 2017-18 for works relating to renewal, replacement, upgradation of critical safety assets under Capital segment of Budget.

About the Fund:

The Fund has a corpus of ` 1 lakh crore over a period of five years, with an annual outlay of ` 20,000 crore.

The Fund is utilized to finance identified works under plan heads Track Renewals, Bridge Works, Signalling and Telecommunication Works, Road Safety Works of Level Crossings and Road Over/Under Bridges, Rolling Stock, Traffic Facilities, Electrical Works, Machinery and Plant, Workshops, Passenger Amenities and Training.

The Fund has been introduced in 2017-18 and in the first year of its inception, an expenditure of ` 16091 crore has been incurred. An outlay of ` 20,000 crore has been allocated in Budget Estimates 2018-19 also.

All safety related measures are taken in full earnestness and all maintenance and other activities are carried out with the help of existing manpower, mechanized means and need based outsourcing.

Institutional Mechanism:

Planning Directorate of Railway Board has been assigned the task of regularly monitoring physical and financial progress of works funded through 'RRSK'.

In addition, an independent 'RRSK Monitoring Committee' has been created headed by CEO, NITI Aayog to regularly examine the RRSK performance.

The RRSK progress/performance shall also be reviewed annually by the 'Committee on Economic Affairs (CCEA).

Optimum utilization of fly ash

As informed by Ministry of Power, ash produced by thermal power plants is a proven resource material for many applications of construction industries and currently is being utilized in Manufacture of Portland Pozzolana Cement (PPC), fly ash bricks/blocks/tiles manufacturing, road embankment construction & low lying area development, in agriculture as soil conditioner etc.

Further, following efforts have been made to make optimum utilization of fly ash as an environmentally sustainable and economically viable product:

- i. GST rates on fly ash and its products have been reduced to 5%.
- ii. To facilitate 100% ash utilization by all coal based thermal power plants, a web portal for monitoring of fly ash generation and utilization data of Thermal Power Plants and a mobile based application titled "ASHTRACK" has been launched by the Government that will help to establish a link between fly ash users and power plants executives for obtaining fly ash for its use in various areas.
- iii. A Workshop and Video Conferences to make use of the Web Page for data updation have been conducted by CEA and NTPC.
- iv. Ash-park has been developed and awareness programme for utilisation of fly ash and its products have been conducted.

About Fly Ash:

Fly ash,, is a [coal combustion product](#) that is composed of the [particulates](#) (fine particles of burned fuel) that are driven out of coal-fired [boilers](#) together with the [flue gases](#).

Ash that falls to the bottom of the boiler is called [bottom ash](#).

In modern [coal-fired power plants](#), fly ash is generally captured by [electrostatic precipitators](#) or other particle filtration equipment before the flue gases reach the chimneys.

Together with [bottom ash](#) removed from the bottom of the boiler, it is known as **coal ash**.

Composition:

Depending upon the source and composition of the coal being burned, the components of fly ash vary considerably, but all fly ash includes substantial amounts of [silicon dioxide](#) (SiO₂) (both [amorphous](#) and [crystalline](#)), [aluminium oxide](#) (Al₂O₃) and [calcium oxide](#) (CaO), the main mineral compounds in coal-bearing [rock strata](#).

Finalisation of National Artificial Intelligence Mission

A Task Force on Artificial Intelligence (AI) for India's Economic Transformation was constituted and The Task Force gave its report recently.

Recommendations:

It has recommended an Inter-Ministerial National Artificial Intelligence Mission to act as a nodal agency for coordinating AI related activities in India.

NITI Aayog has been tasked with formulation of a National Strategy Plan for AI in consultation with Ministries and Departments concerned, academia and private sector.

NITI Aayog has prepared and placed on its website on 4th June 2018 a discussion paper on National Strategy on Artificial Intelligence identifying following five sectors to be focused upon:

- Healthcare,
- Agriculture,
- Education,
- Smart Cities and Infrastructure,
- Smart Mobility and Transportation.

In order to create a policy framework and to develop the ecosystem for Artificial Intelligence, Ministry of Electronics & Information Technology, has constituted four committees covering all the aspects of AI. These Committees are:

- i. Committee on platforms and data for AI,
- ii. Committee on leveraging AI for identifying National Missions in key sectors,
- iii. Committee on mapping technological capabilities, key policy enablers, skilling, re-skilling and R&D
- iv. Committee on cybersecurity, safety, legal and ethical issues.

What is AI?

Artificial intelligence (AI), sometimes called **machine intelligence**, is [intelligence](#) demonstrated by [machines](#), in contrast to the **natural intelligence** displayed by humans and other animals.

In [computer science](#) AI research is defined as the study of "[intelligent agents](#)": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals.

Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other [human minds](#), such as "learning" and "problem solving"

National Waterways Projects in the North East

The Minister of State for Shipping and Finance Shri Pon Radhakrishnan in a written reply to a question in Lok Sabha today informed that 20 National Waterways out of 111 are in North Eastern Region (NER). NW-2 (river Brahmaputra) from Dhubri to Sadiya (891 km) is operational for transport and cruise and cargo vessels are moving on it.

About National Waterways:

There are 111 officially notified [Inland National Waterways \(NWs\) in India](#) identified for the purposes of inland water transport, as per The National Waterways Act, 2016.

Out of the 111 NWs, 106 were created in 2016. The NW network covers around 20,275.5 km. NW-1, 2, & 3 are already operational.

Cargo as well as passenger / cruise vessels are plying on these waterways. Detailed Project Report(DPR) for development of NW-4 & 5 was completed in 2010.

The DPR of NW 5 was updated in 2014. For the newly declared 106 NWs, techno-economic feasibility studies have been initiated

Advances in Superconductivity

For the first time, researchers from the Indian Institute of Science (IISc) Bengaluru have been able to achieve superconductivity at ambient temperature and pressure.

A large number of materials have been found to undergo normal to superconducting transitions.

But such transitions require extremely low temperature and/or extremely high pressure.

Achieving this transition at ambient temperature and pressure therefore gains great significance

What is a Superconductor?

A material is said to exhibit superconductivity when it is able to conduct electric current with practically zero resistance. So unlike the conventionally used materials such as copper and steel, a superconductor can carry a current indefinitely without losing any energy.

Surprising result

The results look robust and interesting. At the same time, it is a surprising result as a mixture of two metals — silver and gold — shows superconductivity.

It's a remarkable achievement.

Meissner effect

The team did observe the Meissner effect though the effect is relatively low.

Meissner effect is where the magnetic fields are completely expelled by the superconducting state and is a crucial evidence for superconductivity.

[General Theory of relativity:](#)

Why in News?

A consortium of astronomers said on Thursday they had for the first time confirmed a prediction of Albert Einstein's theory of general relativity by observing the gravitational effects of a supermassive black hole on a star zipping by it.

Einstein's Prediction:

The German-born theoretical physicist had posited that large gravitational forces could stretch light, much like the compression and stretching of sound waves we perceive with the change of pitch of a passing train.

Researchers from the GRAVITY consortium led by the Max Planck Institute for Extraterrestrial Physics realised that they had a "perfect laboratory" to test Einstein's theory with the black hole, Sagittarius A*, in the centre of the Milky Way.

Black holes are so dense that their gravitational pull can trap even light, and the supermassive Sagittarius A* has mass four million times that of our sun, making it the biggest in our galaxy.

First observation

The results are perfectly in line with the theory of general relativity” and are “a major breakthrough towards better understanding the effects of intense gravitational fields,” said the research team.

This is the first time observers have been able to measure such an effect.

More than 100 years after he published his paper setting out the equations of general relativity, Einstein has been proved right once more — in a much more extreme laboratory than he could have possibly imagined,” said the ESO in a statement.

Practical utility

Astronomers already use another effect predicted by Einstein’s theory of general relativity — that a black hole can bend passing light.

Called gravitational lensing, researchers have used it to peer behind black holes.

Astronomers hope they can make practical use of the latest confirmation of Einstein’s theory to track shifts in S2’s trajectory due to gravity, which could yield information on mass distribution around the black hole.