

## **General Studies-1**

### **Rashtriya Sanskriti Mahotsav**

Ministry of Culture is organising the 9<sup>th</sup> edition of the Rashtriya Sanskriti Mahotsav under the Ek Bharat Shreshtha Bharat, in Tehri, Uttarakhand from 25<sup>th</sup> May to 27<sup>th</sup> May, 2018.

Tehri Lake Festival where one can explore the water sports, organized by the Uttarakhand Tourism every year, will be subsumed within the Rashtriya Sanskriti Mahotsav.

This year the much-awaited 3 days water sports and cultural event is scheduled from 25<sup>th</sup> – 27<sup>th</sup> May 2018 at Tehri Lake, Uttarakhand.

### **Details of Programme:**

The essential thrust of Rashtriya Sanskriti Mahotsav (RSM) is to present rich diversity and uniqueness of Indian culture and to promote the cultural inter-linkages amongst the states to strengthen National integration and also to bid the artists of other parts of the country with the people of Uttarakhand in a single thread of culture.

The Mahotsav was envisioned to preserve, promote and popularize the heritage and cultural diversity of Indian culture and reconnect the new generation with Indian culture.

The gastronomic culture of several other states will also be showcased through a food festival. Chefs of traditional delicacies from different regions of the country will treat the visitors to an unparalleled culinary experience.

The paired state for Uttarakhand under the Ek Bharat Shreshtha Bharat matrix is Karnataka, and while troupes from all over the country will be performing, special emphasis is being given to Karnataka.

The Rashtriya Sanskriti Mahotsav would showcase all the aspects of Indian Culture in different areas and aspects.

Artists from states like Karnataka, Haryana, Gujarat, Rajasthan, Jammu Kashmir, Assam and Punjab will showcase India's cultural heritage through performances of arts, Folk Music, Dance and cuisines.

The stage will also provide a platform to local Tehri folk artists to showcase their talent. Artists of international level stature will

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mesmerize the audience during the festival. Some of the special performances that would be performed are

## **General Studies-2**

### **Model Agriculture Produce and Livestock Contract Farming and Services (Promotion & Facilitation) Act, 2018**

With a view to integrate farmers with bulk purchasers including exporters, agro- industries etc. for better price realization through mitigation of market and price risks to the farmers and ensuring smooth agro raw material supply to the agro industries, Union Finance Minister in the budget for 2017-18 announced preparation of a “Model Contract Farming Act” and circulation of the same to the States for its adoption. Farmer’s producer organizations (FPO’s) have a major role in promoting Contract Farming and Services Contract. On behalf of famers they can enter into agreement with the sponsor.

#### **Salient features of Model Contract Farming Act, 2018 are:**

- The Act lays special emphasis on protecting the interests of the farmers, considering them as weaker of the two parties entering into a contract.(i)
  - In addition to contract farming, services contracts all along the value chain including pre-production, production and post-production have been included.
  - “Registering and Agreement Recording Committee” or an “Officer” for the purpose at district/block/ taluka level for online registration of sponsor and recording of agreement provided.
  - Contracted produce is to be covered under crop / livestock insurance in operation.
  - Contract framing to be outside the ambit of APMC Act.
  - No permanent structure can be developed on farmers’ land/premises
  - No right, title of interest of the land shall vest in the sponsor.
- Promotion of Farmer Producer Organization (FPOs) / Farmer Producer Companies (FPCs) to mobilize small and marginal farmers has been provided
- Ensuring buying of entire pre-agreed quantity of one or more of agricultural produce, livestock or its product of contract farming producer as per contract.

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- Contract Farming Facilitation Group (CFFG) for promoting contract farming and services at village / panchayat at level provided.
- Accessible and simple dispute settlement mechanism at the lowest level possible provided for quick disposal of disputes.
- It is a promotional and facilitative Act and not regulatory in its structure

**PRAGATI (Pro-Active Governance And Timely Implementation)**

- The Prime Minister, Shri Narendra Modi, today chaired his twenty-sixth interaction through PRAGATI - the ICT-based, multi-modal platform for Pro-Active Governance and Timely Implementation.
- The 25 PRAGATI meetings so far have seen a cumulative review of 227 projects with a total investment of over Rs. 10 lakh crore. Resolution of Public Grievances has also been reviewed across a range of sectors.
- PRAGATI (Pro-Active Governance And Timely Implementation) is a multi-purpose and multi-modal platform existing in the Prime Minister's Office which apart from addressing common man's grievances, does monitoring and reviewing of important programmes and projects of the Government of India as well as projects flagged by State Governments.
- This was launched in March 2015 by Prime Ministry Shri. Narendra Modi.
- This platform is used exclusively by the Prime Minister to give suitable directions for redressal of grievances and also on compliance on the projects and programmes and to motivate all officers to work in coordinated manner for the outcome. PRAGATI is not a public web platform.
- The word "PRAGATI" in Sanskrit / Hindi means "Progress" or "improvement" or "increase" or "headway" or "advancement" or "growth".
- The PRAGATI platform bundles three latest technologies: Digital data management, video-conferencing and geo-spatial technology.
- It brings on one stage the Secretaries of Government of India and the Chief Secretaries of the States.

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- With this, the Prime Minister is able to discuss the issues with the concerned Central and State officials with full information and latest visuals of the ground level situation. It is also an innovative project in e-governance and good governance.

- **Indo-Dutch Startup Initiative: #StartUpLink to be Launched**

- With the upcoming visit of the Netherlands' Prime Minister Mark Rutte to India, Indo-Dutch ties across sectors are all set to get a major boost.
- In an endeavour to further the spirit of innovation and entrepreneurship, Invest India (host to the Govt. of India's initiative, 'Startup India' under the Ministry of Commerce and Industry) and the Dutch Government are jointly launching the Indo-Dutch #StartUpLink initiative.
- The Indo-Dutch #StartUpLink is developed for Indian and Dutch startups that are exploring each other's markets and offers access to key information, relevant networks, pilot opportunities, and navigators for the respective startup ecosystems.
- Startup India Hub under Invest India and Netherlands Enterprise Agency under the Ministry of Economic Affairs and Climate Change would act as single points of contact and navigators for their respective countries.
- Clean Air' India Ring, a critical component of the Indo-Dutch #StartUpLink, will be launched on 24th May at Taj Hotel.
- The initiative is a multi-corporate challenge that will test and scale innovations through collaboration between startups, corporates and governments by providing pilot opportunities for promising innovations that solve the problem of pollution.
- Indian and Dutch startups will be matched through this program to relevant corporates for the same.

**SoI between NITI Aayog and ABB**

- NITI Aayog and ABB India signed a Statement of Intent (SoI) today to support the Indian government realize its ambitious vision of 'Make in India' through advanced manufacturing technologies that incorporate the latest developments in robotics and artificial intelligence.

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- NITI Aayog will work with ABB across various sectors of the economy, such as the power and water utilities, industries like food as well as the heavy industries and the transport (rail and metro) and infrastructure to suggest solutions for digitalization, incorporating the Internet of Things (IoT) and Artificial Intelligence (AI) technologies.
- The initiative also covers the fast growing segment of electric mobility.
- Jointly, NITI Aayog and ABB will work with government ministries, solicit feedback for areas critical to them and discuss solutions using industrial automation, and digitalization technologies.
- Through this SoI, NITI Aayog will facilitate participation of policymakers and government functionaries in workshops and training programs organized by ABB India. Such programs will feature subject matter experts and will aim to sensitize policymakers and officials about relevant AI capabilities, and explore ways they can be used for revolutionizing manufacturing productivity.

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**SamagraShiksha'**

- The Union Minister for Human Resource Development, Shri Prakash Javadekar launched the 'SamagraShiksha' - an integrated Scheme for school education extending support to States from pre-school to senior secondary levels for the first time in New Delhi today.
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**About the Scheme:**

- The Scheme is a paradigm shift in the conceptual design of school education by treating 'school' holistically as a continuum from pre-school, primary, upper primary, secondary and senior secondary levels.
- It focuses on improving quality of education at all levels by integrating the two T's – Teachers and Technology.
- He elaborated that 'Samagra' means a holistic approach to treat education as a whole and the Scheme is very aptly named as it

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sees school education holistically without segmenting it into various levels of education.

- Every school will get sports equipment under the SamagraShiksha, at the cost of Rs. 5000 for Primary, Rs. 10,000 for Upper Primary & up to Rs. 25,000 for SSC & HSC schools to inculcate & emphasize relevance of sports to realise the dream of “Khelega India Khilega India”.
- The scheme will build on the grade-wise, subject-wise Learning Outcomes and the largest National Achievement Survey (NAS) conducted in 2017-18 to strategize district level interventions for improving quality of education.
- This approach would help to shift the focus of student learning from content to competencies.
- The Scheme envisages active participation of all stakeholders especially the parents/guardians, School Management Committee (SMC) members, community and the state functionaries towards the efforts to ensure quality education to children.
- “DIKSHA”- the national digital platform for teachers would put high quality teaching learning resources for ready use of teachers.
- The Scheme will support ‘Operation Digital Board’ in all secondary schools over a period of 5 years, so as to enhance the use of digital technology through smart classrooms, digital boards and DTH channels. The Digital initiatives like ShaalaKosh, Shagun, ShaalaSaathi will be strengthened.
- Shri Prakash Javadekar also unveiled the brochure and website of the Samagra Shiksha Scheme.
- The brochure gives an insight into the major features of the Scheme and how the Scheme focuses on improving quality of education, enhancing the Learning Outcomes and using technology to empower children and teachers.
- The Website provides details about the Scheme for information of the States/UTs, teachers, children, institutions and public at large.
- It details out the interventions for which financial support is provided under the Scheme to States and UTs.

**Inner Line permit:**

- **Why in News?**

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- As Assam gets ready to publish the final draft of the National Register of Citizens by June 30, neighbouring Arunachal Pradesh is tightening its borders.

**What happened?**

- Last month, contractors in East Siang district of Arunachal Pradesh said 90 infrastructure projects were on hold because 2,000 labourers had left to ensure that their names figured in the NRC. More than a fortnight later, the police in Longding district caught 87 labourers without the Inner Line Permit (ILP) and pushed them back to where they came from — Assam.
- Similar drives against “ILP violators” saw more than 350 people being thrown out from other districts of the State over the next few days.

**Where is ILP applicable?**

- A British-era system, the ILP is a travel document Indian citizens need to possess to enter the frontier States of north-eastern India: Arunachal Pradesh, Mizoram and Nagaland.
- It is issued under the Bengal Eastern Frontier Regulation, 1873, to regulate the movement of people who do not belong to these States.
- The ILP is valid for a week, but can be extended. People who frequent these States for work can opt for a special ILP renewable annually.
- Since the ILP is mandatory for Indians and the Protected Area Permit for foreigners, the fact that the labourers ejected from Arunachal Pradesh did not possess the permit put their nationality under a cloud.

**Where does NRC fit in?**

- Two days after the first draft of the NRC was published on December 31, 2017, Assam Chief Minister Sarbananda Sonowal said those who were identified as foreigners after failing to make it to the list would be barred from all constitutional rights.
- Political commentators have said the NRC may leave 5 lakh-10 lakh people, mostly those with the ‘Bangladeshi’ tag, stateless.



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- Assam’s neighbours fear some of those declared non-citizens may relocate to their territories to cash in on the demand for cheap labour.

#### Where will they go?

- The sister States often blame Assam for their problems with “illegal migrants” who are ironically indispensable as skilled and unskilled workers.
- Nagaland even has a term for them — IBI, which expands to Illegal Bangladeshi Immigrant.
- Organisations such as the Naga Students’ Federation conduct a ‘census’ to keep a record on the number of non-Nagas as well as IBIs.
- In 2008, several Bengali-speaking Muslims were driven out of Nagaland’s Mokokchung town, and this triggered vigilantism against “demography-changing” migrants.

#### International Relations

##### Colombia to join NATO

- Colombia will next week formally become the NATO’s first Latin American global partner.
- Mr. Santos, who won the 2016 Nobel Peace Prize for his efforts to end a half-century of armed conflict with the former rebel movement FARC, said the move would improve Colombia’s image on the world stage.
- In addition to Colombia, the NATO lists Afghanistan, Australia, Iraq, Japan, the Republic of Korea, Mongolia, New Zealand and Pakistan as “partners across the globe”.
- According to NATO’s website, areas of cooperation include cyber security, maritime security, terrorism and its links to organised crime, as well as building the capacities and capabilities of the Colombian armed forces.

##### About NATO:

- The **North Atlantic Treaty Organization** ( also called the **North Atlantic Alliance**, is an [intergovernmental military alliance](#) between 29 North American and European countries

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based on the [North Atlantic Treaty](#) that was signed on 4 April 1949.

- NATO constitutes a system of [collective defence](#) whereby its independent member states agree to mutual defence in response to an attack by any external party.
- NATO Headquarters are located in [Haren, Brussels, Belgium](#), while the [headquarters of Allied Command Operations](#) is near [Mons, Belgium](#).

### [S-400 Surface-to-Air Missile systems](#)

Why in News?

The U.S. has serious reservations about Russia's S-400 missile system and India moving ahead with the deal could complicate high technology cooperation, Chairman of the U.S. Arms Service Committee Mac Thornberry said on Monday.

These concerns were separate from any sanctions and legislation that the U.S. has imposed on Russia.

#### **About SAM:**

Earlier this month, India and [Russia](#) concluded commercial negotiations for the purchase of five S-400 Surface-to-Air Missile systems estimated at over ₹39,000 crore.

The deal is expected to be announced later this year.

In 2016, India and Russia had signed an agreement on the 'Triumf' interceptor-based missile system which can destroy incoming hostile aircraft, missiles and even drones at ranges of up to 400 km.

S-400 is known as Russia's most advanced long-range surface-to-air missile defence system.

#### **IT corridor in China**

India and China are set to add another layer to their growing partnership in Information Technology (IT), riding on the spirit of the Wuhan "informal" summit between Prime Minister Narendra Modi and Chinese President Xi Jinping.

#### **About the Corridor**

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Led by National Association for Software and Services Companies (NASSCOM), Indian SMEs, some with an established footprint in the United States, intend to deploy their strengths in software.

National Association of Software and Services Companies (NASSCOM) has launched its second IT corridor in China to cash in on the burgeoning Chinese software market which remained elusive despite the presence of top Indian technology firms.

The newly established Digital Collaborative Opportunities Plaza (SIDCOP) platform at Guiyang in China provides market access to Indian IT firms in the huge Chinese market.

The Guiyang corridor will focus on Big Data. Last December, the NASSCOM established its first SIDCOP platform in the Chinese port city of Dalian, which is India's first IT hub in China. Dalian corridor's focus was on IOT (Internet of Things).

The corridor is aimed at setting up local offices and assisting companies from Guiyang to establish software and IT units in India.

**Benefits:**

That would help find practical solutions for their clients—in areas such as banking or automobiles — by processing mountains of data that are available in China.

India is a world leader in the area of Information Technology and IT-enabled services with annual revenue of over \$164 billion and exports of over \$120 billion.

The country has been demanding China to provide market access to Indian IT and pharmaceutical firms for several years to reduce bilateral trade deficit.

- For India, getting access to China's IT market, valued at over \$493 billion in 2013 by the ministry of industry and information technology of China, is important to address the massive trade deficit which has now spiralled to over \$51 billion. The Chinese IT market grew exponentially since then.
- The two corridors, which were started in collaboration with China's provincial governments, are expected to provide the much-needed big opening for Indian IT firms.

**India-IBRD Agreement:**

An Agreement for IBRD Credit of USD 21.7 Million from World Bank for the **Strengthening of Public Financial Management in Rajasthan Project** was signed here today in New Delhi.

The Project size is approximately USD 31 million, of which USD 21.7 million will be financed by the World Bank, and the remaining amount will be funded-out of the State Budget.

The Project duration is 5 years.

**Objectives of Project:**

The Project objective is to contribute to improved Budget execution, enhanced accountability and greater efficiency in Revenue Administration in Rajasthan.

The Project involves Strengthening of the Public Financial Management Framework; Strengthening of Expenditure and Revenue Systems; and Project Management and Capacity Building among others.

## **General Studies-3**

### **Know what you breathe**

Worsening air quality in the last two decades has emerged as one of the major reasons for high numbers of premature deaths, says a new study conducted in 11 north Indian cities.

### **About the Report:**

The findings titled ‘Know what you breathe’, released here on Tuesday, were researched by Indian Institute of Technology (IIT)-Delhi in collaboration with environmental NGO Centre for Environment and Energy Development (CEED). The report found annual mortality linked to air pollution to be in the range of 150-300 persons per 1 lakh population.

The study calculated the annual “mortality burden” through averages of recorded deaths caused due to Chronic Obstructive Pulmonary Disease (COPD), Acute Lower Respiratory Infection (ALRI), coronary disease, stroke, and lung cancer, in these cities. COPD was the largest cause of the deaths (at 29.7%) and lung cancer the lowest (0.6%).

The largest share in total burden was attributed to ALRI in Agra and Meerut, and to COPD in Allahabad, Gaya, Kanpur, Gorakhpur, Lucknow, Patna, Muzaffarpur and Varanasi.

### **Not ‘instant deaths’**

The estimates should not be perceived as instant deaths, said the report, clarifying that they represent premature (earlier than the expected lifetime of the Indian population) deaths due to chronic exposure from pollution.

However, “it isn’t possible to validate these estimates, as cause-specific mortality data do not exist in India.

Premature mortality burden would reduce by 14%-28% annually with the achievement of Indian air quality standards in these cities, the report said.

Using satellite-based high-resolution PM2.5 database to generate particulate matter statistics for the past 17 years, the report concludes that the mean annual ambient fine particulate matter concentration was

75-120% higher than the Indian annual air quality standard in the 10 of the 11 cities.

### **‘Anthropogenic sources’**

The study has attributed residential (cooking, heating and lighting) sources as the largest contributors to annual ambient PM<sub>2.5</sub> concentration (73.8%).

### **Asita project**

#### **Why in News?**

National Mission for Clean Ganga (NMCG) has asked DDA to expedite “Asita”, its Yamuna River Front Development Project.

#### **About Asita:**

Asita, also known as Yamuna River Front Development (RFD) project, aims to restore, revive and rejuvenate the river’s floodplains and make them accessible to the people of Delhi. “Asita” is another name of river Yamuna.

#### **Key features of the project:**

- A special focus of the project is on reviving the river’s bio-diversity in the National Capital.
- River Front “walks”, a major component of the project, will enable people to develop a relationship with river Yamuna.
- The project envisages creating a green buffer area approx. 300mts wide along the river edge with species of riverine ecology. Besides, a wide belt of 150mts along the peripheral roads will be developed as greenways for public amenities that will include a continuous trail of pathways and cycle tracks.
- To revive the ecosystem of the floodplains, wetlands will be created to store the flood waters and also to improve the groundwater recharge which will eventually result in flourishing of biodiversity in the floodplains.

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- An environmentally conscious approach for integration of the river into the urban fabric of the city has been adopted. A people-friendly bio-diversity zone will be created for people to interact freely with the river's eco-system.

**Status of Conservation of Select Aquatic Species Report**

Union Minister for Water Resources, River Development and Ganga Rejuvenation Shri Nitin Gadkari released the report on “Status of Conservation of Select Aquatic Species” in river Ganga in New Delhi today.

He also inaugurated a day-long workshop organized by World Wildlife Fund (WWF) on the theme “Ganga and its Biodiversity: Developing a Road Map for Habitat and Species Conservation”.

A database of Ganga Praharis’, a self-motivated cadre, being created by Wildlife Institute of India (WII) was also launched by the Minister.

**About Ganga Praharis:**

The Ganga Praharis’, a self-motivated volunteer cadre from local communities have been trained and taken on board by National Mission for Clean Ganga (NMCG) and Wildlife Institute of India (WII) to make Clean Ganga Mission a mass movement.

This cadre has been created to ensure the sustainability of efforts in conservation of the biodiversity in river Ganga.

So far, 427 Ganga Praharis across five main stem Ganga basin states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal have been involved in this project.

**About the Report:**

The first-of-its-kind report “Status of Conservation of Select Aquatic Species” which was released by the Minister present the status of select species of river Ganga and synthesize the information from available literature as well as from the data generated through the rapid biodiversity assessment of the river.

This would make valuable contribution for making a baseline for these species.

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The Minister also released another publication “Ganga Biodiversity-At a Glance” which gives species with details, along with their depiction and maps.

These reports have been prepared by Wildlife Institute of India (WII), Dehradun as part of the “Biodiversity Conservation and Ganga Rejuvenation” project being sponsored by National Mission for Clean Ganga (NMCG) under the aegis of the Namami Gange programme.

The project aims to develop a science-based aquatic species restoration plan for Ganga by involving multiple stakeholders.

During the rapid biodiversity assessment made under the project, species, such as Siebold’s smooth scaled water snake (*Enhydris sieboldii*), were observed after a gap of 70 years in river Ganga.

The biodiversity assessment team also reported new nesting ground of Indian Skimmer (*Rhynchops albicollis*), a globally threatened bird, between Allahabad and Mirzapur, positive signs for the river’s biodiversity.

An exhibition was also put up during the event on Biodiversity Conservation in river Ganga depicting the journey so far and road map ahead.

## **United Liberation Front of Asom (ULFA)**

### **Why in News?**

The United Liberation Front of Asom (ULFA) wants to do what the Border Security Force has allegedly failed to — check illegal migration to Assam through the Bangladesh border.

These include withdrawal of cases registered against the outfit’s members ever since it was formed in 1979 to fight for Assam’s sovereignty, Scheduled Tribe status for six ethnic communities and ensuring land rights for Assam’s indigenous people.

The outfit had in 2011 submitted demands to the Centre seeking amendment to the Constitution for protecting the rights and identity of the indigenous people. The demand has gained currency after protests over the Centre’s bid to push the Citizenship (Amendment) Bill of 2016.

The peace deal with ULFA is expected to be sealed before the 2019 polls but Centre is reportedly keen on inking it soon to isolate the Paresh Baruah-led ULFA (Independent).



### **About ULFA:**

The **United Liberation Front of Assam** is a separatist outfit operating in [Assam](#), [North East India](#) for the [Indigenous Assamese people](#).

It seeks to establish a sovereign Assam with an armed struggle in the [Assam conflict](#).

The [government of India](#) banned the organisation in 1990 citing it as a terrorist organisation while the [United States Department of State](#) lists it under "other groups of concern."

### **India drag US to WTO**

India has launched a complaint against the United States to challenge U.S. President Donald Trump's tariffs on steel and aluminium, a filing published by the World Trade Organization showed on Wednesday.

India, China, Russia, Japan, Turkey and the European Union have all dismissed that claim, regarding the U.S. tariffs as "safeguards" under the WTO rules, entitling them to a combined \$3.5 billion in annual compensation.

India's retaliation claim seeks to recoup a cost of \$31 million levied on its aluminium exports and \$134 million on steel, and it has said it could target U.S. exports of soya oil, palmolein and cashew nuts in its retaliation.

Under WTO rules, the U.S. has 60 days to settle the complaint, after which India could ask the WTO to set up an expert panel to adjudicate.

In its complaint, India listed a string of ways the U.S. tariffs violated the WTO rules and unfairly damaged India's interests.

It said they broke the WTO's safeguards agreement and the U.S. was trying to use its tariffs to get other countries to agree to "voluntary export restraints".

The U.S. had also exceeded the maximum import tariff allowed by the WTO and the tariffs were not applied uniformly to steel and aluminium imports from all suppliers, breaking a core principle of the WTO rulebook.

### **SURYA KIRAN-XIII**

Joint Military Exercise SURYA KIRAN-XIII between India and Nepal will be conducted at Pithoragarh from 30 May to 12 June 2018.

The exercise will comprise of nearly 300 soldiers from both Indian and Nepal Army who would be sharing their experiences gained during conduct of various counter insurgency and counter terrorism operations in the past.

Exercise SURYA KIRAN is a biannual event which is conducted alternatively in Nepal and India.

Notably in the series of military training exercises undertaken by India with various countries, Exercise SURYA KIRAN with Nepal is the largest in terms of troop participation.

The aim of this exercise is to conduct battalion level joint training with emphasis on counter terrorism operations in mountainous terrain.

During the exercise, aspects of disaster management and joint effort towards relief work have also been included.

The joint military exercise will enhance the level of defence cooperation which will further strengthen the bilateral relations between the two nations.

### **[CSIR bags the Clarivate Analytics India Innovation Award 2018 in the Government Research Organizations Category](#)**

Council of Scientific & Industrial Research has been awarded the Clarivate Analytics India Innovation Award 2018 in the Government Research Organizations Category. This award yet again recognizes CSIR as the top innovator.

The citation reads as “CSIR is a pioneer of India’s intellectual property movement and a leader in terms of sheer volume of patents published during the analysis period.

### **About the award:**

Every year, Clarivate Analytics – formerly the IP & Science division of Thomson Reuters - recognizes the most innovative companies in India according to patent-related metrics that get to the essence of what it means to be truly innovative.

This analysis is done using proprietary Clarivate Analytics data and tools. The evaluation is strictly driven by metrics for both patent volume (patents published) as well as patent quality (grant success rate, extent of globalization, and citations).

### **About CSIR**

The Council of Scientific & Industrial Research (CSIR), a contemporary R&D organization, is known for its cutting edge R&D knowledge base in diverse science & technology areas.

CSIR has a dynamic network of 38 national laboratories, 39 outreach centres, 3 Innovation Complexes and 5 units.

CSIR's R&D expertise and experience is embodied in about 4600 active scientists supported by about 8000 scientific and technical personnel.

CSIR covers a wide spectrum of science and technology – from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology.

It provides significant technological intervention in many areas with regard to societal efforts which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors.

Further, CSIR's role in scientific human resource development is noteworthy. According to the SCImago Institutions Ranking World Report 2017, CSIR has been ranked 9<sup>th</sup> in the world amongst the 1207 government institutions, with an overall global ranking of 75 in the world, covering 5250 institutions

## **Yamuna Action Plan**

### **Why in News?**

Union Minister for Water Resources, River Development & Ganga Rejuvenation Shri Nitin Gadkari instructed senior Delhi Jal Board (DJB) officials to speed up all the projects of YAP-III Projects while chairing a review meeting yesterday in New Delhi.

### **About YAP:**

The **Yamuna Action Plan** (YAP) is a bilateral project between the [Government of India](#) and [Japan](#).

It is one of the largest river restoration projects in India.

The government of Japan, via the Japanese Bank for International Cooperation (JBIC), has provided financial aid of 17.7 billion to carry out the project, which is being executed by the National River Conservation Directorate, the [Ministry of Environment and Forests](#), and the [Government of India](#).

### **New nanozyme created at IISc:**

Nanomaterials that can behave like human enzymes have now been successfully synthesized by a team of researchers from Indian Institute of Science (IISc), Bengaluru.

### **About Nanoenzyme:**

They produced the new nanozyme — nanomaterial with enzyme-like activity — by using vanadium pentoxide nanocrystals of just 150-200 nm size.

The nanozyme was able to act like the natural antioxidant enzyme glutathione peroxidase in our body and help maintain the hydrogen peroxide levels within the threshold.

They synthesised the nanozyme with four different morphologies — nanowires, nanosheets, nanoflowers and nanospheres.

The nanozyme uses the same pathway as the natural enzyme but without generating any free radicals.

**Aim of study:**

The study was primarily aimed at understanding the effect of different crystal facets of nanozymes on their enzyme mimetic activity.

The team plans to carry out studies on mice models to understand more about the four nanozyme forms and their potential as therapeutic agents.

Nanozymes with tunable catalytic properties are emerging as the next generation of artificial enzymes that find applications in neuroprotection, cardioprotection and cancer therapy.

[The robust, flexible electrodes recorded 98% water-splitting efficiency](#)

Using paper coated with nickel nanoparticles and model catalysts as electrodes, researchers at Indian Institute of Science Education and Research (IISER) Kolkata have been able to split water and generate oxygen and hydrogen gas with very low overpotentials (voltage applied over and above the theoretical voltage to split water).

The flexible electrodes recorded 98% water-splitting efficiency and maintained robustness and durability even after more than 10 continuous days of operation.

**Porous surface**

The porous nature of the paper and abundance of functional groups on cellulose microfibrils help in strongly binding different metal ions and finally nickel nanoparticles in a three-step immersion process.

Coating the paper with nickel makes it electrically conductive. The nickel-coated paper is then coated with two different catalysts (nickel-iron oxyhydroxide and nickel-molybdenum alloy) to serve as an anode and a cathode.

Splitting water to generate oxygen and hydrogen gas requires cost-effective and stable catalysts that have high activity — generate higher current at lower applied voltage.

The more current produced the more will be amount of water split and hydrogen gas produced.

The team achieved “excellent” water splitting ability when nickel-paper electrodes coated with catalysts were used in electrolysis cells.

### **Developments in Space**

#### **Signs of early Life on Mars:**

Iron-rich rocks — which formed in lake beds — are the best place to seek fossil evidence of life on Mars from billions of years ago, researchers say.

It is believed that Mars supported primitive life forms around four billion years ago and the new study could aid the search for traces of tiny creatures — known as microbes — on the Red Planet.

The study, published in the *Journal of Geophysical Research*, said that sedimentary rocks made of compacted mud or clay are the most likely to contain fossils.

These rocks are rich in iron and a mineral called silica, which helps preserve fossils.

#### **Abundance of water**

They formed during the Noachian and Hesperian Periods of Martian history between three and four billion years ago.

At that time, the planet’s surface was abundant in water, which could have supported life.

The rocks are much better preserved than those of the same age on Earth, the researchers said.

This is because Mars is not subject to plate tectonics —the movement of huge rocky slabs that form the crust of some planets —which over time can destroy rocks and fossils inside them.

### **PM Mudra Yojana**

#### **Why in News?**

The Prime Minister, Shri Narendra Modi, today interacted with Mudra Yojana beneficiaries from across the country, through video bridge.

**C.A From 23<sup>rd</sup> May to 29<sup>th</sup> May 2018**

The video conference is the second in the series of video bridge by the Prime Minister, interacting with various beneficiaries of Government schemes.

Expressing happiness at being able to interact with the beneficiaries, the Prime Minister said that the Mudra Yojana has become a job multiplier.

He further added that the initiative has helped in relieving the entrepreneurs from the vicious cycle of moneylenders and middlemen.

It has opened up new opportunities for youth, women and those who wanted to start or expand their businesses.

**About PMMY:**

Under Pradhan Mantri MUDRA Yojana, Government has so far given out 12 crore loans worth Rs. 5.75 lakh crore.

Out of which 28% of the loans worth Rs. 3.25 lakh crore were given to first time entrepreneurs.

Of the total loans disbursed, 74% of the total beneficiaries were women and 55% of the loans were given to SC/ST and OBC communities.

By aiding small and micro businesses, the scheme has helped to strengthen people economically, socially and has given people a platform to succeed.

Pradhan Mantri MUDRA Yojana (PMMY) is a scheme launched by Prime Minister on April 8, 2015 for providing loans up to Rs. 10 lakh to the non-corporate, non-farm small/micro enterprises.

These loans are classified as MUDRA loans under PMMY. These loans are given by Commercial Banks, RRBs, Small Finance Banks, Cooperative Banks, MFIs and NBFCs.

**Gaj Yatra:**

**Why in News?**

In 2014, villagers in Meghalaya's Garo Hills set aside a part of their community-owned land to create village reserve forests, giving right of passage to elephants.

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In acknowledgement of that gesture, the Ministry of Environment, Forest and Climate Change and the Wildlife Trust of India (WTI) on Monday rolled out the 'Gaj Yatra' from Tura, the principal town of Garo Hills.

#### **About Gaj Yatra**

'Gaj Yatra', a "journey celebrating India's national heritage animal", aims at securing 100 elephant corridors across India.

Four of these are in Meghalaya, including the Siju-Rewak corridor that some 1,000 elephants use to travel between the Balpakram and Nokrek National Parks in the State.

The event involves taking an elephant mascot across districts frequented by jumbo herds for generating awareness among the people.

Mini underlined the role of Nokmas, traditional custodians of the land, in supporting the move towards co-existence between man and animal and helping conservationists for the success of the initiative.

Expansion of human settlements have resulted in fragmented elephant habitats in the Garo Hills, leading to conflicts.

#### **UNEP-BCCI coolaborates for Green Cricket**

##### *Why in News?*

The main aim of the partnership is to spread greater awareness about key environmental challenges that are facing the country and highlight alternate and more sustainable solutions.

##### **About the Initiative:**

- Through the agreement, the BCCI will endeavor to reduce its environmental impact by greening its operations and engaging cricketers and fans in green initiatives.
- The partnership will help make cricket green and sensitise spectators towards minimising waste generation during matches.
- The partnership will also focus on phasing out single-use plastic across stadiums and cricket events in the country.



**About UN Environment:**

UN Environment is the leading global voice on the environment. It provides leadership and encourages partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. UN Environment works with governments, the private sector, civil society and with other UN entities and international organizations across the world.

**About the Board of Control for Cricket in India:**

The Board of Control for Cricket in India (BCCI) is the national governing body for cricket in India. Today, the BCCI has 30 full-time members. It organizes – among others – the Indian Premiere League.

**About World Environment Day:**

World Environment Day is the single largest celebration of our environment each year. Since it began in 1974, it has grown to become a global platform for public outreach that is widely celebrated across the globe.