



THE CORE IAS



June, 2023

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science and technology

Vigyan -Vidushi

Vigyan -Vidushi – 2023, an initiative to address the gender balance in the discipline of Physics at the doctorate level, has commenced at the Homi Bhabha Centre for Science Education (HBCSE), in Mumbai.

Astronomers spot a surprising solar eruption that maintains constant temperature

Scientists tracking the continuous evolution of the energy state of the core of a solar eruption have found it strangely maintained a constant temperature as it erupted energetic and highly magnetised plasma from the solar corona into space. The finding can improve our understanding of how such eruptions can impact communication systems on Earth.

Coronal Mass Ejections (CMEs) are large-scale eruptions of charged particles (plasma) and magnetic fields from the solar atmosphere into space. They can disrupt a range of ground- and space-based technologies and satellites on Earth. Thus, it is crucial to understand their evolution and propagation through interplanetary space. There is a wide range of plasma temperatures within CMEs, from cold chromospheric material (around 10^4 K) to hot plasma (around 10^7 K). When CMEs propagate, several processes can exchange energy (electrical, kinetic, potential, thermal, and so on.), thereby heating or cooling the plasma. To understand the underlying processes, it is important to study the evolution of thermodynamic properties (such as density, temperature, thermal pressure, etc.) of CMEs. This will help our ability to monitor space weather.

The Visible Emission Line Coronagraph (VELC) onboard Aditya-L1, India's first solar mission will be launched soon and it will perform both spectroscopy and imaging of the CMEs in the inner corona. A similar kind of analysis using VELC data will provide new insights of the evolution of CME thermodynamic properties in the inner corona.

Indian Drugs Controller approves first indigenously developed animal-derived tissue engineering scaffold for healing skin wounds with minimum scarring

The first indigenously developed tissue engineering scaffold from mammalian organs, an animal-derived Class D Biomedical Device that can rapidly heal skin wounds at low-cost with minimum scarring, has received approval from the Indian Drugs Controller.

With this, the Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), an autonomous institution of the Department of Science and Technology (DST), became the first institution in the country to develop Class D medical devices that satisfy all statutory requirements of the Central Drugs Standard Control Organisation, Government of India.

The concept of using animal-derived materials as advanced wound care products is not new. However, indigenous technology was so far not available for fabricating quality products that satisfy the requirements of the Drugs Controller General. Therefore, such products were imported making them expensive.

GEMCOVAC® -OM

GEMCOVAC® -OM is the fifth vaccine developed with support from Mission COVID Suraksha implemented by DBT and BIRAC under Atmanirbhar Bharat 3.0 package of Govt. of India for accelerated development of Indian COVID-19 vaccines.

GEMCOVAC® -OM is a thermostable vaccine and does not require ultra-cold chain infrastructure used for other approved mRNA-based vaccines.

The GEMCOVAC® -OM vaccine is delivered intra-dermally using a needle-free injection device system and in study participants it generated significantly higher immune responses. The clinical outcome demonstrates the need for variant-specific vaccines for desired immune response.

How mRNA vaccines work?

- An mRNA vaccine instructs the body itself to create a part of the virus.

- Genetically engineered mRNA instructs cells to make the spike protein found on the surface of Covid-19 virus.
- The expectation is that the immune system will mount a response against the spike protein, and that, If and when an actual infection happens, the immune cells will recognize the spike protein and act against it.
- This is a challenging task as under normal atmospheric pressure ice transforms to liquid water before going to the gaseous state
- To achieve the conversion of ice to water vapor so that it can be removed, the surrounding pressure and temperature has to be tweaked and then kept stable in a manner that the characteristics of the vaccine are the same as before lyophilization

Advantages:


- it requires a smaller dose than a traditional vaccine, given that they require amount of antigen will be create in the body itself.
- Unlike in the West, where the vaccine has to be store at sub-zero temperatures, the vaccine in India can be store 2-8°C.
- mRNA is fragile and breaks down easily, which is why vaccines base on this platform need to be stores at extremely low temperature stop prevent a breakdown.
- GEMCOVAC-19 can now be stores at the temperature of a standard medical refrigerator.
- The vaccine stores in powder form. The conversion from liquid to powder form takes place by a process called lyophilization, which involves freezing the product and subjecting it to vacuum to remove the water (converted from its ice state to water vapor state by a process called sublimation)

About DBT:


- The Department of Biotechnology (DBT), under the Ministry of Science & Technology, promotes and accelerates the development of biotechnology in India, including the growth and application of biotechnology in the areas of agriculture, healthcare, animal sciences, environment, and industry.**

About BIRAC:

- Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Section 8, Schedule B, Public Sector Enterprise, set up by the Department of Biotechnology (DBT), Government of India, as an Interface Agency to strengthen and empower the emerging Biotech enterprises to undertake strategic research and innovation, addressing nationally relevant product development needs.**




UPSC CSE 2022 RESULT



I would like to thank the Core IAS team and especially AMIT SIR for his continuous support throughout this long journey. His guidance and grasp about each stage of UPSC CSE is just amazing. My answer writing skills are fully developed by Amit sir constant support, which helped me to get through this exam.

Thanks & Regards
Jatin Jain
AIR 91 in UPSC 22



JATIN JAIN

AIR-91



MAIDEN INDIA-FRANCE-UAE MARITIME PARTNERSHIP EXERCISE

The first edition of India, France and UAE Maritime Partnership Exercise commenced in the Gulf of Oman. INS Tarkash and French Ship Surcouf both with integral helicopters, French Rafale aircraft and UAE Navy Maritime Patrol Aircraft are participating in the exercise.

SANSHODHAK

'Sanshodhak', the fourth of four ships of Survey Vessels (Large) (SVL) Project, being built by L&T/GRSE for Indian Navy was launched in Chennai. The ship named 'Sanshodhak', meaning 'Researcher', signifies the primary role of the ship as a Survey Vessel. The first three ships of the project, Sandhayak, Nirdeshak and Ikshak were launched earlier.

SVL ships will replace the existing Sandhayak Class survey ships, with new generation hydrographic equipment, to collect oceanographic data.


Ex Khaan Quest 2023

Multinational Peacekeeping Joint Exercise "Ex Khaan Quest 2023" featuring participation from military contingents and observers from over 20 countries has commenced in Mongolia.

The Indian Army is represented by a contingent from the GARHWAL RIFLES. The military exercise will enhance the level of defence co-operation between Indian Army and participating countries especially with the Mongolian Armed Forces which will enhance bilateral relations between the two countries.

MQ-9B drones

The Defence Acquisition Council (DAC) accorded the Acceptance of Necessity (AoN) for acquisition of 31 MQ-9B (16 Sky Guardian and 15 Sea Guardian) High Altitude Long Endurance (HALE) Remotely Piloted Aircraft Systems (RPAS) for Tri-Services from the USA through Foreign Military Sale (FMS) route.

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CSAT BATCH 2024



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- *Updated content*

By: Gaurav Nagar



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Negotiations for the Supply Chains (Pillar-II) Agreement

Negotiations for the Supply Chains (Pillar-II) Agreement were substantially concluded during the second in-person Indo-Pacific Economic Framework (IPEF) Ministerial Meeting held in Detroit, hosted by the US. Once implemented, the Supply Chain Agreement is expected to bring in a number of benefits to India and the other IPEF partner countries.

Some of the key benefits expected are:

- potential shift of production centres in key goods/critical sectors to India;
- bolstering of domestic manufacturing capacities;
- giving a boost to Aatmanirbhar Bharat and Production Linked Initiatives schemes;
- mobilization of investments especially in production of key goods, logistics services and infrastructure;
- deeper integration of India in the Global Supply and Value Chains particularly of Indian MSMEs;
- enhanced exports from India; upward mobility in the value chains;
- mitigation of risks of economic disruptions to India from supply chain shocks/adverse events;

creation of a seamless regional trade ecosystem facilitating flow of Indian products; enhanced trade facilitation including through digital exchange of trade documentation, quicker port clearances; joint Research and Development; and workforce development.

India and other partner countries will continue to engage to ensure effective implementation of the Agreement so as to achieve the overall objectives of the Agreement which is to make IPEF supply chains more resilient, robust, and well-integrated, and contribute towards economic development and progress of the region as a whole.

The IPEF Supply Chains (Pillar-II) Agreement is one of the fastest ever concluded plurilateral economic cooperation Agreements. Under this Agreement, IPEF partner countries are seeking to: make supply chains more resilient, robust, and well-integrated through crisis response measures; cooperation for mitigation of the effect of disruptions to better ensure business continuity,

and improve logistics and connectivity; promoting investments particularly in critical sectors and production of key goods; and worker role enhancement through requisite upskilling and reskilling, and increasing comparability of skills credentials frameworks across IPEF. It entails cooperative and collaborative efforts among the IPEF partners.

Sovereign Gold Bond Scheme 2023-24

The SGBs will be sold through Scheduled Commercial banks (except Small Finance Banks, Payment Banks and Regional Rural Banks), Stock Holding Corporation of India Limited (SHCIL), Clearing Corporation of India Limited (CCIL), designated post offices, and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited. The features of the Bond are as under:

- To be issued by the Reserve Bank of India on behalf of the Government of India.
- The SGBs will be restricted for sale to resident individuals, HUFs, Trusts, Universities and Charitable Institutions.
- The SGBs will be denominated in multiples of gram(s) of gold with a basic unit of One gram.
- The tenor of the SGB will be for a period of eight years with an option of premature redemption after 5th year to be exercised on the date on which interest is payable.
- The tenor of the SGB will be for a period of eight years with an option of premature redemption after 5th year to be exercised on the date on which interest is payable.
- The maximum limit of subscription shall be 4 Kg for individual, 4 Kg for HUF and 20 Kg for trusts and similar entities per fiscal year (April-March) notified by the Government from time to time. A self-declaration to this effect will be obtained from the investors at the time of making an application for subscription. The annual ceiling will include SGBs subscribed under different tranches, and those purchased from the secondary market, during the fiscal year.

- The investors will be compensated at a fixed rate of 2.50 per cent per annum payable semi-annually on the nominal value.
- The interest on SGBs shall be taxable as per the provision of Income Tax Act, 1961 (43 of 1961). The capital gains tax arising on redemption of SGB to an individual is exempted. The indexation benefits will be provided to long term capital gains arising to any person on transfer of the SGB.
- SGBs acquired by the banks through the process of invoking lien/hypothecation/pledge alone, shall be counted towards Statutory Liquidity Ratio.

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HISTORY OPTIONAL TEST SERIES

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Hindi / English Medium



Mission LiFE

The concept of LiFE aims to promote sustainable living by encouraging individuals to make changes in their lifestyles and emphasizes responsible and conscious use of resources to safeguard and conserve the environment.

To generate widespread awareness and advocacy for LiFE across India, a month-long mass mobilization campaign on Mission LiFE is currently underway. Following the “whole of government” and “whole of society” approach, the Ministry has mobilized Central Ministries/ Departments, State/ UT Governments/ Administrations, Institutions, and private organizations to spread the message of Mission LiFE.

1. National Centre for Sustainable Coastal Management (NCSCM): The NCSCM has launched yet another effort to promote Mission LiFE on Agatti Island, in the Union Territory of Lakshadweep. As part of Lifestyle for the Environment, NCSCM scientists undertook a public outreach and beach clean-up drive at Agatti Island. This is one of the inhabited islands in the Lakshadweep archipelago, and it holds cultural, demographic, ecological, and economic significance. Agatti Island is a popular tourist destination in Lakshadweep due to its scenic beauty, white sandy beaches, and vibrant marine life. The island offers opportunities for activities such as snorkeling, scuba diving, and boat tours. Fishing is an important economic activity on this island and throughout the Lakshadweep archipelago. The islanders have a long-standing tradition of fishing, and it plays a crucial role in their livelihoods. However, Lakshadweep Island has faced several environmental challenges in recent years, including marine pollution. Rising sea levels, coral bleaching, biodiversity loss, and extreme weather events are some of the specific environmental challenges associated with climate change in the islands.

- 2. Environmental Information, Awareness, Capacity Building and Livelihood Programme (EIACP):** The program is dedicated to raising awareness, building capacity, and promoting sustainable actions among individuals and communities across India. The EIACP Programme Centres conducted a series of activities as part of a mass awareness campaign on Mission LiFE leading up to the World Environment Day 2023 celebrations.
- 3. Environment Education Programme (EEP):** Various Eco-clubs under Environment Education Programme (EEP) organized 1022 events for promotion of Mission LiFE with participation of more than 37,000 children. More than 36,000 LiFE pledges also were taken during the day's events.

INDIAN NAVY'S GREEN INITIATIVES

The Navy, as a self-driven and environmentally responsible force, has always been committed towards environment protection and green initiatives. As guardian of the seas, the Navy employs a number of ships, submarines and aircraft that have high energy intensity, thus increased energy efficiency is paramount in every operation and process the Navy undertakes.

INDIAN NAVY has commissioned solar power with cumulative capacity of 15.87MW which is in line with the Navy's objective of fulfilling Govt of India's 'Jawaharlal Nehru National Solar Mission (JNNSM)' mission. These plants are grid-connected utilising single-axis sun tracking technology with computerised monitoring & control. Additionally, 16 MW capacities of SPVs are at various stages of execution.

Towards combating oil spills at Naval harbours, eco-friendly marine bio-remedial agents have been indigenously developed through NMRL. The state-of-the-art technology is unique in the maritime domain. The product consists of a combination of micro-organisms and their growth stimulant, which consume various types of oils such as diesel, lubricating, dirty oils etc, thus cleaning the seawater from any oil

contamination and its consequent damage to the marine ecosystem.

Indian Navy in collaboration with IISc (Bengaluru) has operationalized a 'first of its kind' 100KW capacity AC plant in the country based on the natural refrigerant Carbon dioxide. This is a significant step towards reducing use of conventional HCFCs with high Global Warming Potential (GWP) by employing a natural refrigerant and is in line with Kigali Agreement of 2016 ratified by India. The plant has been installed at the Centre of Excellence (Marine Engineering), INS Shivaji for trials and exploitation. Till now, the plant has clocked 850 hrs of operation successfully.

Utilisation of Hydrogen as a potential alternate source of fuel is also being pursued by the IN, successful shore trials of Hydrogen Aspirated Diesel Engine have been completed which has enhanced clean combustion, thus reducing CO emissions significantly. The device has now been fitted onboard a ship for pilot trials. Further, in line with GoI initiative of Make in India, a developmental project on hydrogen fuel cell-powered ferry craft is also being pursued with shipyards. The use of alternate fuels, such as Used Cooking Oil-based biodiesel has also progressed in the last year to reduce vehicular emissions. A total of 192KL of B-7 blend biodiesel has been used in motor transport vehicles of the Navy.

To reduce the overall carbon footprint and enhance environmental sustainability, Indian Navy is 'Geared Up and Committed' to March towards pursuance of Green Initiatives, realizing the national aim, to ensure a 'Greener and Cleaner future for our next generations'.

Cyclone Biparjoy

- Developed in the Arabian Sea, cyclone Biparjoy, earlier expected to move towards the Pakistan coastline, has now changed its path and is heading towards the northern Gujarat coast with landfall expected.
- According to India's Regional Specialised Meteorological Centre (RSMC), the cyclone might cause storm surges of 2-3 metres in height, destruction of thatched houses, damage to pucca houses and roads, floodings, widespread damage to standing crops, plantations and orchards, and disruption of railways, powerlines and signalling systems in the northern and western coastal districts of Gujarat.

- Cyclone Biparjoy, which is expected to generate wind speeds of 125-135 kmph with gusts reaching up to 150 kmph by the time it reaches land, is a tropical cyclone. The National Disaster Management Authority classifies cyclones broadly into two categories: extratropical cyclones and tropical cyclones.**

What is a cyclone?

- A cyclone is a large-scale system of air that rotates around the centre of a low-pressure area. It is usually accompanied by violent storms and bad weather. As per NDMA, a cyclone is characterised by inward spiralling winds that rotate anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

What are extratropical cyclones?

- Also known as mid-latitude cyclones, extratropical cyclones are those which occur outside of the tropic. They have "cold air at their core, and derive their energy from the release of potential energy when cold and warm air masses interact", according to the US National Oceanic and Atmospheric Administration (NOAA). It added that such cyclones always have one or more fronts — a weather system that is the boundary between two different types of air masses. One is represented by warm air and the other by cold air — connected to them, and can occur over land or ocean.

What are tropical cyclones?

- Tropical cyclones are those which develop in the regions between the Tropics of Capricorn and Cancer. They are the most devastating storms on Earth. Such cyclones develop when "thunderstorm activity starts building close to the centre of circulation, and the strongest winds and rain are no longer in a band far from the centre," NOAA noted. The core of the storm turns warm, and the cyclone gets most of its energy from the "latent heat" released when water vapour that has evaporated from warm ocean waters condenses into liquid water, the agency added. Moreover, warm fronts or cold fronts aren't associated with tropical cyclones.**
- Tropical cyclones have different names depending on their location and strength. For instance, they are known as hurricanes in the Caribbean Sea, the Gulf of Mexico, the North Atlantic Ocean and

the eastern and central North Pacific Ocean. In the western North Pacific, they are called typhoons.

What is the “landfall” of a cyclone?

- Simply put, landfall is the event of a tropical cyclone coming onto land after being over water. As per the IMD, a tropical cyclone is said to have made a landfall when the center of the storm – or its eye – moves over the coast.
- Crucially a landfall should not be confused with a ‘direct hit’, which refers to a situation where the core of high winds (or eyewall) comes onshore but the centre of the storm may stay remain offshore. As per the US’s National Oceanic and Atmospheric Administration (NOAA), because the strongest winds in a tropical cyclone are not located precisely at the centre, it is possible for a cyclone’s strongest winds to be experienced over land even if landfall does not occur.

What is the damage caused by a cyclone’s landfall?

- The damage caused by the landfall will depend on the severity of the cyclone – marked by the

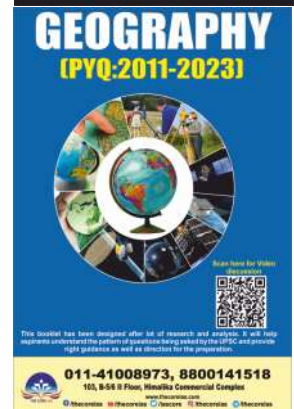
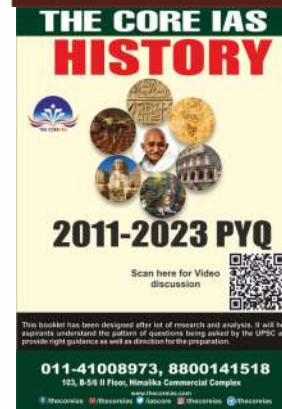
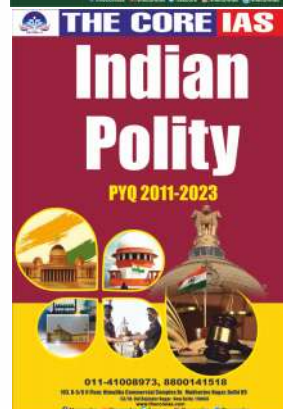
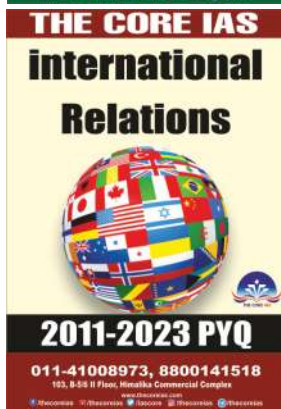
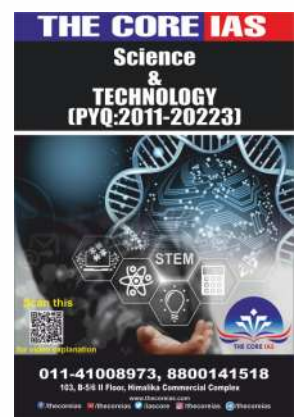
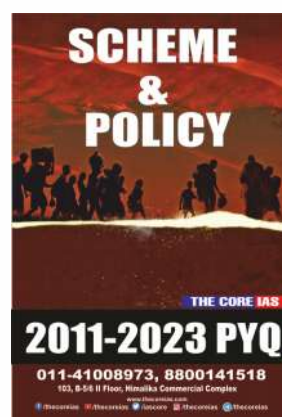
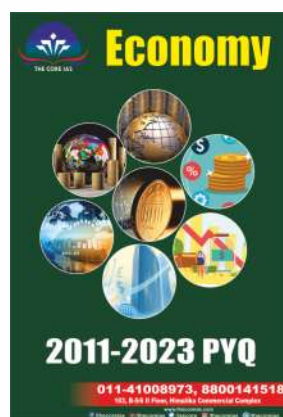
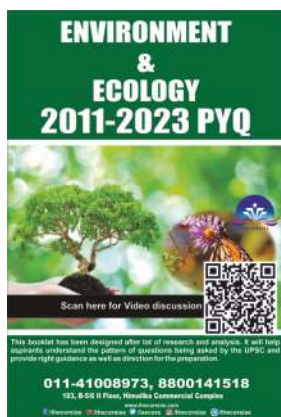
speed of its winds. For Cyclone Biparjoy, classified by the IMD as a “very severe cyclonic storm”, the impact may include extensive damage to kutchha houses, partial disruption of power and communication lines, minor disruption of rail and road traffic, potential threat from flying debris and flooding of escape routes.

- The factors behind this kind of damage include extremely strong winds, heavy rainfall and the storm surge which cause devastating floods in the coast.

How long does a landfall last?

- Landfalls can last for a few hours, with their exact duration depending on the speed of the winds and the size of the storm system. Cyclone Biparjoy’s land process is expected to last around five to six hours, with the cyclone almost completely dissipating over approximately the next 24 hours.
- Cyclones lose their intensity once they move over land because of sharp reduction of moisture supply and increase in surface friction. This means that while landfalls are often the most devastating moments of cyclones, they also mark the beginning of its end.

OTHER PYQ BOOKLETS



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Venkateswara Swamy Temple

In Jammu

Kharchi Puja

Kharchi Puja is one of the biggest festivals of Tripura. It highlights the spiritual & cultural spirit of the state with the participation of thousands of devotees every year.

Vitasta-The Festival of Kashmir

Vitasta program was organized to take the rich art, culture, literature, craft and cuisine of Kashmir to the whole country.

Hamari Bhasha, Hamari Virasat

National Archives of India organizes exhibition "Hamari Bhasha, Hamari Virasat" on the occasion of 75th International Archives Day

This exhibition is an endeavour to commemorate the treasured heritage of India's linguistic diversity as a Nation:

India is blessed with extraordinary language diversity. According to an estimate out of 7,111 languages spoken globally, about 788 languages are spoken in India alone. India is thus one of the four most linguistically diversified countries in the world, along with Papua New Guinea, Indonesia, and Nigeria.

Indian scientists refute earlier find of fossil of earliest animal in Bhimbetka

Indian scientists have proved that the Indian Dickinsonia fossil that had been originally reported from UNESCO World Heritage Site Bhimbetka Cave Shelter in an earlier research in 2021, was actually a left-over impression of a fallen beehive, not a true fossil.

The Vindhyan Supergroup, an archive of more than one billion years of history of the earth, is one the largest basins of the world and is the site of many discoveries of fossil that explain how earliest life originate and diversified on the earth.

Reporting of an Ediacaran fossil by a group of American scientists from the area encouraged a group of Ediacaran palaeontologists at BSIP curious to take a look and further hunt for another similar fossil.

हिन्दी साहित्य (वैकल्पिक विषय)

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This is because; Ediacaran fossils were traced to be the earliest animals that existed on the earth around 550 million years ago and hence evoke much interest among evolutionary biologists and palaeontologists. Fossil discoveries in the Precambrian Era (4000-538 million years of the earth history) claim to know about the evolutionary changes occurred in the life on the earth. Because of their implications on our understanding of the evolution of life on the earth, many

of these discoveries are followed and scrutinized by some researchers.

Laser Raman Spectroscopy and X-Ray Diffraction (XRD) confirmed presence of honey and wax in the material, due to the activity of bees in forming hives. Such misinterpretations are rare, but they need to correct with due diligence for tracing the exact evolutionary trail and the correct study of the Indian geology.

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UPSC CSE 2022 RESULT



I am grateful for the apt and right guidance provided by Ankit Sir and the Core IAS. Sir gave me the analysis of PYQ themes along with understanding the UPSC mindset in prelims. The sessions for understanding the DEMAND in Mains exam helped me gain confidence and crack this exam.

I am really thankful for Sir's personal guidance and mentorship.

Shruti Jain
(Rank-165, CSE 2022)

SHRUSTI

AIR-165





Phukot Karnali Hydro Electric Project

NHPC Limited, a Schedule 'A' Enterprise of the Government of India with 'MINI RATNA' status, is a premier PSU in India for development of hydropower and Vidhyut Utpadan Company Limited (VUCL), Nepal is responsible to develop, build, own and operate large-scale hydropower projects in public-private partnership model in Nepal.

The project will use the flow from the Karnali River for power generation and the generated power will be fed into integrated power system of Nepal. The installed capacity of the project shall be 480 MW with average annual generation of about 2448 GWh. The key features of the project are a 109 metre high RCC dam and an underground power house where the 06 turbines of 79 MW each shall be housed. Additionally, to utilize minimum environmental release one Surface Power House of 6 MW capacity i.e. two machines of 3 MW each is also planned. This project is conceived as a Peaking Run-of-River (PRoR) type scheme.

National Commission for Women

The National Commission for Women was set up in 1992 under the National Commission for Women Act, 1990. This body was established to review the constitutional and legal safeguards for women.

Composition

The Commission must consist of a minimum number of members which includes a chairperson, a member secretary, and the other five members.

- **Chairperson:** The central government should nominate the chairperson.
- **Five members:** The five members are also to be nominated by the central government from amongst the person of ability, integrity, and standing. They should possess experience in various fields like law or legislation, trade unionism, management of industry potential of women, women's voluntary organization, education,

administration, economic development, and social good-being.

- **Member Secretary:** The Central Government also nominates member secretary. He/ she should be either an expert in the field of management, an organization, or an officer who is a member.

It recommends the remedial legislative measures, facilitates redressal of grievances and advises the government on all policy matters affecting women. It enjoys all the powers of a civil court.

G20 International Financial Architecture Working Group

The International Financial Architecture Working Group is one of the important workstreams under the G20 Finance Track with a focus on strengthening the international financial architecture. It also aims to address multiple challenges faced by vulnerable countries.

JULLEY LADAKH

Indian Navy is conducting "Julley Ladakh" (Hello Ladakh), an outreach programme to Ladakh to increase awareness about the service in the pristine state and to engage with youth and civil society there.

VAIBHAV Fellowship Programme

The Government has launched a new fellowship programme to connect the Indian STEMM diaspora with Indian academic and R&D institutions for collaborative research work leading to sharing of knowledge, wisdom, and best practices in the frontier areas of science & technology.

The Vaishvik Bhartiya Vaigyanik (VAIBHAV) fellowships programme to be implemented by the Department of Science and Technology (DST), Ministry of Science and Technology, would be awarded to outstanding scientist/technologists of Indian origin (NRI/OCI/PIO) who are engaged in research activities in their respective countries. The 75 selected fellows would be invited to work in 18 identified knowledge verticals including quantum technology, health, pharma, electronics, agriculture, energy, computer sciences, and material sciences amongst others.


The Government of India had organized the VAIBHAV Summit to connect Indian STEMM diaspora with Indian Institutions which was inaugurated by the Hon'ble PM and saw the participation of more than 25,000 attendees. Indian STEMM diaspora from more than 70 countries participated in the deliberations.

The VAIBHAV Fellow would identify an Indian Institution for collaboration and may spend up to two months in a year for a maximum of 3 years. Fellowship would include fellowship grant (INR 4,00,000 per


month), international and domestic travel, accommodation and contingencies. The VAIBHAV fellows are expected to collaborate with their Indian counterparts and help initiate research activities in the host institution in the cutting-edge areas of Science and Technology.

Mount Yunum

located in Lahaul region of Himachal Pradesh



UPSC CSE 2022 RESULT

Throughout the journey of UPSC CSE exam, I have been consistently mentored by Amit Sir (THE CORE IAS). He has been the guiding light for me in all the stages: Prelims, Mains & Interview.

As opposed to conventional pedagogy and study methods, Sir has a unique way & his understanding of this exam so deeply helped me to be an outlier.

I convey my utter gratitude for nurturing me as an officer today.

- Regards
Akansha Jain
AIR 702
UPSC CSE 2022

AKANSHA

AIR-702



SCHEME

PM SVANidhi Scheme

PM SVANidhi Scheme launched aiming to restore Swarozgar, Svavlamban, Swabhimaan (Self Employment, Self-Sustenance, and Self-Confidence) within street vendors has become one of the fastest growing micro-credit schemes of the Government of India and has provided its citizens access to credit and linkages to social security schemes.

To provide handholding support to street vendors, Ministry of Housing and Urban Affairs (MoHUA) launched PM SVANidhi a micro credit scheme, facilitating a working capital collateral free loan of ₹ 10,000, with subsequent loans of ₹ 20,000 and ₹ 50,000 with 7% interest subsidy. The scheme focuses on increasing the digital footprint in India by promoting the use of digital transactions among street vendors. To incentivize adoption of digital transactions, a cashback of up to ₹ 100 per month is given to Street Vendors.

The scheme has empowered COVID-19 affected street vendors to resume their livelihood. Not just that, it has achieved various milestones in financial inclusion and mainstreaming of street vendors. were highlighted. This scheme, launched amidst the pandemic, has made significant contributions to the lives of street vendors across the country.

Nyaya Vikas Portal

The Centrally Sponsored Scheme (CSS) of Department of Justice, Ministry of Law and Justice for Judicial Infrastructure, with technical assistance of NRSC, ISRO is catering to a user-friendly and transparent web portal to facilitate better delivery of judicial infrastructural projects via Nyaya Vikas.

Mission on Advanced and High-Impact Research (MAHIR)

The Ministry of Power and the Ministry of New and Renewable Energy have jointly launched a National Mission to quickly identify emerging technologies in the power sector and develop

them indigenously, at scale, for deployment within and outside India. The National Mission, titled “Mission on Advanced and High-Impact Research (MAHIR)” aims to facilitate indigenous research, development and demonstration of the latest and emerging technologies in the power sector. By identifying emerging technologies and taking them to the implementation stage, the Mission seeks to leverage them as the main fuel for future economic growth and thus make India a manufacturing hub of the world.

The Mission will be funded by pooling financial resources of the Ministry of Power, Ministry of New and Renewable Energy and the Central Public Sector Enterprises under the two Ministries. Any additional funding needed will be mobilized from Government of India’s budgetary resources.

Planned for an initial period of five years from 2023-24 to 2027-28, the Mission will follow the technology life cycle approach of Idea to Product.

Vibrant Villages Programme

- It is a Centrally sponsored scheme, announced in the Union Budget 2022-23 (to 2025-26) for development of villages on the northern border, thus improving the quality of life of people living in identified border villages.
- It will cover the border areas of Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim and Ladakh.
- Vibrant Village Action Plans will be created by the district administration with the help of Gram Panchayats.
- There will not be overlap with Border Area Development Programme.

Objective:

- The scheme aids to identify and develop the economic drivers based on local, natural, human and other resources of the border villages on the northern border;
- Development of growth centres on ‘hub and spoke model’ through promotion of social entrepreneurship, empowerment of youth and women through skill development and entrepreneurship;

- Leveraging the tourism potential through promotion of local, cultural, traditional knowledge and heritage;
- Development of sustainable eco-agri businesses on the concept of 'one village-one product' through community-based organisations, cooperatives, NGOs.

Jal Jeevan Mission

Jal Jeevan Mission, is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India. The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission. The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.

Har Ghar Jal Scheme:

- **Har Ghar Jal Scheme is part of the Jal Jeevan Mission undertaken by the Ministry of Jal Shakti in India. It aims to provide every household in the country with access to piped water connections.**
- **The term "Har Ghar Jal" translates to "water in every home" and reflects the mission's objective.**
- **The "Har Ghar Jal" scheme has resulted in a significant rise in the percentage of households in India that now have access to piped water connections, reaching 64%, indicating a substantial progress since the mission was launched.**
- **In addition to providing piped water connections to households, the scheme also includes the installation of water connections in village schools, anganwadis, and community buildings.**

SAGAR SAMRIDDHI

This system has been developed by National Technology Centre for Ports, Waterways and Coasts (NTCPWC) the technological arm of MoPSW. The new technology brings in marked improvement against the old system of Draft & Loading Monitor (DLM) system. The system will bring in

synergy among multiple input reports like daily dredging report, the pre and post dredging survey data before processing and producing real time dredging report. The 'Sagar Samriddhi' monitoring system will also allow Daily and monthly progress Visualisation, Dredger performance and downtime monitoring, easy location track data with snapshot of loading, unloading and idle time.

National Training Conclave

The National Training Conclave is being hosted by Capacity Building Commission with an objective to foster collaboration among civil services training institutes and strengthen the training infrastructure for civil servants across the country.

Prime Minister has been a proponent of improving the governance process and policy implementation in the country through capacity building of civil service. Guided by this vision, the National Programme for Civil Services Capacity Building (NPCSCB) – 'Mission Karmayogi' was launched to prepare a future-ready civil service with the right attitude, skills and knowledge. This Conclave is yet another step in this direction.

More than 1500 representatives from training institutes, including Central Training Institutes, State Administrative Training Institutes, Regional and Zonal Training Institutes, and Research institutes will participate in the conclave. Civil Servants from central government departments, state governments, local governments, as well as experts from the private sector will take part in the deliberations.

This diverse gathering will foster the exchange of ideas, identify the challenges being faced and opportunities available, and generate actionable solutions and comprehensive strategies for capacity building. The conclave will have eight panel discussions, each focusing on key concerns pertinent to Civil services training institutes such as faculty development, training impact assessment and content digitisation, among others.

DAKSHTA

A new curated collection, DAKSHTA (Development of Attitude, Knowledge, Skill for Holistic Transformation in Administration) For Young Professionals, is now Live on the iGOT Karmayogi Platform. Tailored for Young Professionals & Consultants engaged in Government, this collection (consisting of 18 courses) seeks to build functional, domain and behavioural competencies by acquainting learners with subjects crucial for discharging their duties, and responsibilities effectively.

PM Kisan

The Government with a view to augment the income of the farm families is implementing a Central Sector Scheme, namely, "Pradhan Mantri KISAN SAMman Nidhi (PM-KISAN)". The Scheme is in effect from 01.12.2018.

- With a view to provide income support to all land holding eligible farmer families, the Government has launched PM-KISAN.
- The scheme aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income.
- All land holding eligible farmer families (subject to the prevalent exclusion criteria) are to avail of the benefits under this scheme, as per the recent cabinet decision taken during May 2019.
- The revised Scheme is expected to cover around 2 crore more farmers, increasing the coverage of PM-KISAN to around 14.5 crore beneficiaries, with an estimated expenditure by Central Government of Rs. 87,217.50 crores for year 2019-20.
- **Earlier, under the scheme, financial benefit has been provided to all Small and Marginal landholder farmer families with total cultivable holding up to 2 hectares with a benefit of Rs.6000 per annum per family payable in three equal installments, every four months.**

NANDI (NOC Approval for New Drug and Inoculation System) Portal

With this portal, Department of Animal Husbandry and Dairying (DAHD) will facilitate the regulatory approval process with transparency to assess and examine veterinary product proposals will be more streamlined through seamless integration with the SUGAM portal of Central Drugs Standard Control Organization. This initiative is highlighted as a significant step towards advancing Digital India and promoting the well-being of livestock and the livestock industry. The launch of the NANDI portal is another notable undertaking following the animal vaccination coverage initiative and Mobile Veterinary Units (MVUs). This initiative would also provide valuable support to researchers and industries from a commercial perspective. By raising awareness among livestock rearers and improving logistical facilities, there would be an increase in the consumption of drugs. Union Minister stressed the importance of closely monitoring the portal's activities for a few months to establish a robust system.

CHAMPIONS 2.0 Portal

Initiatives of the Ministry of MSME, dedicated towards growth and development of MSME



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