

C.A From 9th May to 15th May

General Studies-1

Second oldest Rock on earth found in Orissa:

A rock sample recovered nearly eight years ago from Champua in Odisha's Kendujhar district has put India at the forefront of geological research in the world.

Scientists have found in the rock a grain of magmatic zircon (a mineral that contains traces of radioactive isotopes) that is an estimated 4,240 million years old — a discovery of great promise to study the earth's early years.

The only instance of zircon older than this discovery was the one found in Jack Hill, Western Australia, which was 4,400 million years old and is the oldest known rock sample. But the zircon in this case was from metamorphosed sedimentary rock, unlike the Singhbhum one, which was formed from magma.

Thus, the Singhbhum rock from where the zircon was recovered is the second oldest and its zircon, the oldest magmatic zircon on earth.

Benefits of Findings:

Their study will add valuable information about the presence of water in the first few hundred million years of the Earth's history.

It will also give us clues to when plate tectonics began.

National Technology Day

To promote and facilitate science and techno base infrastructure to the society, Nehru Science Centre, Mumbai (NCSM), is celebrating the National Technology Day on 11th May 2018.

Mumbai Metro is another technological marvel that is destined to improve the traffic conditions of Mumbai. In collaboration with MMRC, Mumbai, another exhibition "Making of Underground Metro Line –III", will be inaugurated on the occasion of the National Technology day 11th May, 2018 at 10:00 AM at the centre.

On this occasion, the most displayed “Illuminating India: 5000 Years of Science and Innovation” exhibition at the Science Museum, London will be displayed in Mumbai for the first time and they include the great Lambton’s Theodolite, the Compound Lever, Sir C V Raman’s spectroscope, J C Bose’s Cresco graph and Phytography . These objects are from the collections of Indian Association for the Cultivation of Science, Kolkata, Sir J C Bose Trust, Kolkata and Survey of India, Dehradun.

Backgrounder-

Illuminating India: 5000 Years of Science and Innovation”, which was organised at the Science Museum, London was one of the major event under the India –UK Year of Culture.

Nehru Science Centre, the Nodal Agency appointed by the Ministry of Culture, Government of India, was responsible for sending 6 antiquity objects and 8 non-antiquity objects for this exhibition.

This exhibition was visited by the Hon’ble Prime Minister of India Shri Narendra Modi on 18th April, 2018, during his recent visit for the heads of Common Wealth meeting in UK. On conclusion of the exhibition the objects have now come back to India and will be on display for the press and public only for three days from 11th May to 13th May 2018.

Since 1999, May 11 is celebrated as National Technology Day to mark India’s technological advancements. Here are a few things you need to know about this day.

1. On May 11, 1998, India detonated three nuclear bombs in the Indian Army’s Pokhran Test Range.
2. Hansa 3, India’s first indigenous aircraft was first tested on the same day in 1998 in Bangalore.
3. Successful test firing of Trishul, a short range missile made in India, was also done on the same day.
4. Every year, on this day, the Technology Development Board of India awards various individuals with national awards for their contribution to indigenous technology.

General studies-2

NABH (NextGen Airports for BHarat) Nirman initiative.

Shri Suresh Prabhu, Minister for Civil Aviation today said that the government is committed to the building of airport capacity as part of NABH (NextGen Airports for BHarat) Nirman initiative.

He said that the three key aspects of NABH Nirman are:

- (1) fair and equitable land acquisition,
- (2) long-term master plan for airport and regional development and (
- 3) balanced economics for all stakeholders.

He said that improving passenger amenities, promoting cargo handling facilities and early operationalisation of 56 new airports under UDAN scheme will be his focus areas while simultaneously working on improving regional connectivity and improving passenger services in a big way.

About NABH;

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Budget 2018-19 announced a new initiative NABH Nirman to expand airport capacity by more than five times to handle a billion trips in a year.

The expansion will be funded by leveraging the balance sheet of Airports Authority of India.

Domestic air passenger traffic has grown at 18% per annum and the regional connectivity Scheme UDAN, will connect 56 unserved airports and 31 unserved helipads across the country. Operations have already started at 16 airports.

15th Asia Media Summit (AMS) 2018

The 15th Asia Media Summit (AMS) 2018 is being hosted by the Ministry of Information and Broadcasting, Government of India, jointly with the Indian Institute of Mass Communication (IIMC), New Delhi and Broadcast Engineering Consultants India Limited (BECIL), from 10th -12th May, 2018 in New Delhi.

About AMS:

The AMS 2018, an annual summit of the Asia-Pacific Institute for Broadcasting Development (AIBD) Kuala Lumpur, is a prestigious summit in the Asia Pacific Region and India is hosting the event for the first time.

The Summit, with the theme '**Telling Our Stories – Asia and More**', would be organized in two parts Pre-summit workshop (8th-9th) and Summit (10th-12th).

Participants would represent organizations like Ministries responsible for Information and Broadcasting in the Asian region, International Organizations UNESCO, FAO, UN; Regulators; Radio and Television broadcasting companies both national/ public and private broadcasters; Television channels and networks, Institutes/Academies of Communication, Media Research; Community Radio groups; Press and Media, and broadcast equipment manufacturers.

Outcome of Summit:

The Summit would encourage regional and bilateral dialogue and cooperation to respond to challenges to the broadcasting sector in the region.

It would provide a unique opportunity for broadcasters in the Asian region to share their thoughts on software and hardware aspects of Broadcasting.

There are also opportunities for networking, facilities for business to business meetings and prospective translation of these meetings into trade and economic relations after the summit.

In the concluding session, **World Television Awards 2018** would be presented by Minister of State for Information & Broadcasting, Youth Affairs & Sports, Col. Rajyavardhan Singh Rathore The **Closing Ceremony** would witness the handing over of the baton for hosting the next AMS to Philippines.

International relations:

US Pulls out of Iran Deal:

The United States has pulled out of the Iran nuclear deal, President Donald Trump announced on Tuesday, upending a key foreign policy achievement of his predecessor Barack Obama.

Under the 2015 deal, the Joint Comprehensive Plan of Action (JCPOA), involving five permanent members of the United Nations Security Council and Germany, Iran had agreed to stop its nuclear programme in exchange of relief from economic sanctions.

Despite United States President Donald Trump's decision to pull out of the Joint Comprehensive Plan of Action (JCPOA), the nuclear deal itself won't be scrapped as long as [Iran](#) and the other signatories: the U.K., France, Russia, China, Germany and the European Union remain committed to it.

Even so, India could face the impact of the U.S. decision on the deal as well as instituting the "highest level of economic sanctions" in several ways:

- 1. Oil prices:** The impact on world oil prices will be the immediately visible impact of the U.S. decision. Iran is presently India's third biggest supplier (after Iraq and Saudi Arabia), and any increase in prices will hit both inflation levels as well as the Indian rupee.
- 2. Chabahar:** India's moves over the last few years to develop berths at the Shahid Beheshti port in Chabahar was a key part of its plans to circumvent Pakistan's blocks on trade with Afghanistan, and the new U.S. sanctions could slow or even bring those plans to a halt depending on how strictly they are implemented.
- 3. INSTC:** Beyond Chabahar, India has been a founder of the International North South Transport Corridor (INSTC) since it was ratified in 2002. It starts from Iran and aims to cut right across Central Asia to Russia over a 7,200-km multi-mode network, cutting down transportation and time taken by trade by about 30%.

Plans for INSTC sped up after the JCPOA was signed in 2015 and sanctions on Iran were lifted. New U.S. sanctions will affect these plans

immediately, especially if any of the countries along the route or banking and insurance companies dealing with the INSTC plan also decide to adhere to U.S. restrictions on trade with Iran.

4. Shanghai Cooperation Organisation: India joined the SCO along with Pakistan last year, and both will be formally admitted in June 2018, when Prime Minister Narendra Modi travels to the Chinese city of Qingdao for the SCO summit. This year, Chinese officials say they will consider inducting Iran into the 8-member Eurasian security organisation. If the proposal is accepted by the SCO, which is led by China and Russia, India will become a member of a bloc that will be seen as anti-American, and will run counter to some of the government's other initiatives, for eg. the Indo-Pacific quadrilateral with the U.S., Australia and Japan.

Page | 6

Fifteenth Finance Commission

Why in News?

The Fifteenth Finance Commission has constituted an Advisory Council to advise and assist the Commission. The role and functions of the Advisory Council will be:

- To advise the Commission on any issue or subject related to the Terms of Reference (ToR) of the Commission, which may be of relevance;
- To assist in the preparation of any paper or research study which would enhance the Commission's understanding on the issues containing in its ToR; and
- To help in broadening the Commission's ambit and understanding to seek best national and international practices on matters pertaining to fiscal devolution and improving the quality and reach and enforcement of its recommendations.

About Finance Commission:

The Finance Commission (Miscellaneous Provisions) Act, 1951 was passed to give a structured format to the finance commission and to bring it to par with world standards, by laying down rules for the

qualification and disqualification of members of the commission, and for their appointment, term, eligibility and powers.^[6]

Qualifications of the members

The Chairman of a finance commission is selected from people with experience of public affairs. The other four members are selected from people who:

1. Are, or have been, or are qualified, as judges of a high court,
2. Have knowledge of government finances or accounts, or
3. Have had experience in administration and financial expertise; or
4. Have special knowledge of economics

Functions

1. Distribution of net proceeds of taxes between Center and the States, to be divided as per their respective contributions to the taxes.
2. Determine factors governing Grants-in-Aid to the states and the magnitude of the same.
3. To make recommendations to the president as to the measures needed to augment the Fund of a State to supplement the resources of the panchayats and municipalities in the state on the basis of the recommendations made by the finance commission of the state.
4. Any other matter related to it by the president in the interest of sound finance.
5. A finance commission is an autonomous body which is governed by the government of India.

Swachh Bharat Summer Internship- 100 Hours of Swachhata”

The Human Resource Development Minister, Shri Prakash Javadekar has urged students to come forward and become part of the nationwide Swachhata Mission by participating in “Swachh Bharat Summer Internship- 100 Hours of Swachhata” campaign. '

About the Campaign:

Swachh Bharat Summer Internship – 100 Hours of Swachhata'- was launched by the Ministry of Human Resource Development in

association with the Ministry of Drinking Water and Sanitation to engage youth across the country for sanitation related work and village level development.

The program from 1st May to 31st July 2018 is aimed to develop the skill and orientation of youth for sanitation related work, bring youth across the country to make a significant contribution to the swachhta revolution and integrate youth in the community service in rural areas in the run up to the 150th birth anniversary of Mahatma Gandhi.

Who can Participate?

Students enrolled in Colleges and Universities may apply in 'Swachh Bharat Summer Internship' through the enrolment form.

Candidates may participate individually or in teams also.

The location and team size may be decided in consultation with Nodal Officers.

After enrollment for the internship through the website, candidates will be accepted as valid only once approved by the Nodal Officer at the Parent Institution.

Candidates are to devote at least 100 hours conducting Swachhata-related activities in rural areas selected by them and approved by the parent institution. The last date of registration is 15th May, 2018.

Benefits of Participation:

All participants will be given a Swachh Bharat Internship Certificate on completion of their internship and its approval by the parent institution.

2 curriculum credits will be given to interns whose internship reports are found eligible to get credits by parent institution.

The Best 3 interns/ teams will be recognized at college, university, state and national levels.

Directorate General of Trade Remedies

The Government of India carried out an Amendment to the Government of India (Allocation of Business) Rules, 1961 on May 7, 2018 substituting "Directorate General of Trade Remedies" in place of

“Directorate General of Anti-Dumping and Allied Duties” in Department of Commerce.

Benefits:

This has paved way for creation of an integrated single umbrella National Authority to be called the Directorate General of Trade Remedies (DGTR) for providing comprehensive and swift trade defence mechanism in India.

The amendment of Allocation of Business Rules has also mandated Department of Commerce with work pertaining to recommendation of Safeguard measures.

Purpose of Decision:

Presently, the trade defence mechanism in India lacks optimality and takes more than a year to complete proceedings in cases pertaining to unfair trade practices.

Currently, the Directorate General of Anti-dumping and Allied Duties (DGAD) deals with anti-dumping and CVD cases, Directorate General of Safeguards (DGS) deals with safeguard measures and DGFT deals with quantitative restriction (QR) safeguards.

The DGTR will bring DGAD, DGS and Safeguards (QR) functions of DGFT into its fold by merging them into one single national entity. DGTR will deal with Anti-dumping, CVD and Safeguard measures.

It will also provide trade defence support to our domestic industry and exporters in dealing with increasing instances of trade remedy investigations instituted against them by other countries.

The creation of DGTR will provide a level playing field to the domestic industry. In the last three years, India initiated more than 130 anti-dumping/countervailing duty/safeguard cases to deal with the rising incidences of unfair trade practices and to provide a level playing field to the domestic industry.

About DGTR:

The DGTR will function as an attached office of Department of Commerce. The recommendation of DGTR for imposition of Anti-dumping, countervailing & Safeguard duties would be considered by the Department of Revenue.

Senior Citizen draft Bill

The Ministry of Social Justice and Empowerment has drafted the Maintenance and Welfare of Parents and Senior Citizen Draft Bill, 2018, that will amend the 2007 version of the legislation to expand its scope and provide for more stringent penalties.

Key provisions in the Bill:

- The Bill enhances the jail term for those found abandoning or abusing their parents, 60 years or older, to six months from the existing three months.
- The Bill expands the definition of children, which currently refers to only biological children and grandchildren, to include daughter-in-law and son-in-law and also adopted/step-children.
- It extends the definition of maintenance beyond provision of food, clothing, housing, health care to include “safety and security” of the parent.
- As per the Bill, senior citizens can also approach a Maintenance Tribunal in case their children neglect or refuse to maintain them. In such cases, the draft Bill states that the Tribunal can order the children or, in case the person is childless, the relative to pay a monthly maintenance to the senior citizen. The amount would be decided by taking into account the standard of living of the senior citizen and the financial situation of both the parties.
- The Bill proposes to make monthly maintenance amount variable as people who earn more, can afford to shell out a higher amount for the upkeep of their parents.
- The Bill also introduces a punitive measure of up to one month imprisonment in case the monthly allowance remains unpaid.
- Currently, various government and private schemes for insurance/health, housing and travel, have varied cut-off age for offering benefits meant for senior citizens. The Bill mandates the uniform age across schemes should be 60 years.

- The Bill will require the government to establish and run at least one Senior Citizen Care Home in every district in the country.
- As per the Bill, if parents transfer property to their children on the condition that they take care of them, and this clause is breached, the transfer of property will be deemed to be “made by fraud or coercion or under undue influence” and a tribunal can order it to be transferred back to the parent.

- **Maintenance and Welfare of Parents and Senior Citizens Act**

- The Ministry of Social Justice and Empowerment, which is reviewing the Maintenance and Welfare of Parents and Senior Citizens Act, 2007, has also proposed to widen the definition of children to include adopted children or stepchildren, sons-in-law and daughters-in-law, grandchildren and minors represented by their legal guardians.
- At present, only biological children and grandchildren come under the Act.
- The Ministry has drafted the Maintenance and Welfare of Parents and Senior Citizens Draft Bill, 2018, which will supersede the existing Act.
- The draft Act also proposes doing away with the upper limit of Rs. 10,000 a month in maintenance, thus making it variable.
- Those who earn well can and should shell out higher amounts for the upkeep of their parents.
- Also the definition of the term ‘maintenance’ should go beyond providing food, clothing, housing and healthcare and include safety and security of parents,” the official said.
- Elderly parents can approach a maintenance tribunal if their children neglect or refuse to maintain them.

- **The Domestic Violence Act**

- **Why in News?**

- The Domestic Violence Act — meant to punish men who abuse women in a relationship — extends to all man-woman relationships, and also protects divorced women from their former husbands, the Supreme Court has upheld.

- A three-judge Bench of Justices Ranjan Gogoi, R. Banumathi and Naveen Sinha confirmed a Rajasthan High Court ruling of 2013 that the term ‘domestic violence’ cannot be restrained to marital relations alone.
- **Order of SC:**
- The Supreme Court’s recent order, based on a question of law raised by advocate Dushyant Parashar, found no reason to differ with the High Court’s conclusion that ‘domestic relationship’ includes “consanguinity, marriage, a relationship in the nature of marriage, adoption or as family members living together as a joint family”.
- The apex court did not intervene with the interpretation that ‘domestic relationship’ is not confined to the “relationship as husband and wife or a relationship in the nature of marriage, but it includes other relationship as well such as sisters, mother, etc.
- Domestic relationship includes any relationship between two persons who either live at the present moment or have at any point of time in the past lived together in a shared household.
- Absence of subsisting domestic relationship in no manner prevents the court from granting certain reliefs specified under the Act,” the High Court’s reasoning was upheld by the Bench.
- The court held that domestic violence can continue even after divorce and the reach of the Act should not be shackled by confining only for the protection of women living in marriage.
- It illustrated how a divorcee husband could resort to violence by entering the workplace of his former wife to commit an act of violence, or even attempt to communicate with her, or threaten or cause violence to her relatives or dependents or any other person. I
- It amounts to domestic violence if the former husband tried to dispossess the woman from a jointly-owned property or refuse to return her ‘stridhan’ or valuable security or other property. The Act brings all these acts of violence within its ambit.

SC to examine pleas for forming five-judge Bench to decide on special status of Jammu and Kashmir

- The Supreme Court will examine fervent pleas for a five-judge Constitution Bench to decide whether special status granted to Jammu and Kashmir is unconstitutional.
- Mr. Venugopal said the case should be taken up by the court after three months. He said the Centre would also make submissions on the constitutionality of Article 35A, which gives Jammu and Kashmir special status.

About Article 35A

- Article 35A of the Constitution gives the State Legislature *carte blanche* to decide who all are the “permanent residents” of the State and grant them special rights and privileges in public sector jobs, acquisition of property within the State, scholarships and other public aid and welfare programmes.
- The provision mandates that no Act of the State legislature coming within the ambit of Article 35A can be challenged for violating the Indian Constitution or any other law of the land.
- Article 35A was incorporated into the Indian Constitution in 1954 by an order of President Rajendra Prasad on the advice of the Jawaharlal Nehru Cabinet.
- Parliament was not consulted when the President incorporated Article 35A into the Indian Constitution through a Presidential Order issued under Article 370.
- Article 368 (i) of the Constitution mandates that only Parliament can amend the Constitution by introducing a new Article.
- The court is hearing a writ petition filed by a non-governmental organisation, We the Citizens, which challenges the validity of both Article 35A and Article 370.
- It challenges that Article 35A is against the “very spirit of oneness of India” as it creates a “class within a class of Indian citizens”.
- A second petition filed by Jammu and Kashmir native, Charu Wali Khanna, has challenged Article 35A for protecting certain provisions of the Jammu and Kashmir Constitution which restricts the basic right to property if a native woman marries a man not holding the Permanent Resident Certificate.

General Studies-3

- **Animal-free tests for drug manufacturers.**

- In a step that would spare animals from suffering due to drug experiments, the Indian Pharmacopoeia Commission has approved modern, animal-free tests for drug manufacturers.
- In the 2018 edition of Indian Pharmacopoeia, that provides guidelines on tests for drugs manufactured and marketed in India, the IPC has replaced the pyrogen test carried out on rabbits and the abnormal toxicity test carried out on guinea pigs and mice with tests that can be done in test tubes.
- The guidelines in the edition will come into effect from July 1.
- The pyrogen test is carried out to check impurity or substance that can cause adverse side-effects. For the test, the drug is injected into a rabbit and the animal is closely observed for feverish symptoms.
- The abnormal toxicity test is carried out to check potential hazardous biological contamination in vaccine formulations.
- This batch test is done before the product is approved for marketing. In this, mice or guinea pigs are injected with the vaccine. The scientists observe if there is death of any animal.

New mandate

- With the Indian Pharmacopoeia Commission's new mandate, the pyrogen test will be replaced by a bacterial endotoxin test or a monocyte activation test which can be carried out in test tubes.
- Vaccine manufacturers can apply for waiver for the abnormal toxicity test by getting a compliance certificate from the National Control Laboratory instead.
- People for the Ethical Treatment of Animals (PETA) India has been pushing for doing away with the cruel methods of testing on animals for the past several years.

About IPC:

- **Indian Pharmacopoeia Commission (IPC)** is an Autonomous Institution of the Ministry of Health and Family Welfare, Govt. of India.
- IPC is created to set standards of drugs in the country. It's basic function is to update regularly the standards of drugs commonly required for treatment of diseases prevailing in this region.
- It publishes official documents for improving Quality of Medicines by way of adding new and updating existing monographs in the form of **Indian Pharmacopoeia (IP)**.
- It further promotes rational use of generic medicines by publishing **National Formulary of India**.
- IP prescribes standards for identity, purity and strength of drugs essentially required from health care perspective of human beings and animals.
- IPC also provides IP Reference Substances (IPRS) which act as a finger print for identification of an article under test and its purity as prescribed in IP.
- IP standards are authoritative in nature. They are enforced by the Regulatory authorities for quality control of medicines in India. During Quality Assurance and at the time of dispute in the court of law the IP standards are legally acceptable.

National Clean Ganga Mission (NCGM)

Why in News?

- Only about a fifth of the Rs. 20,000 crore allotted for the National Clean Ganga Mission (NCGM) has been utilised till March 2018.
- That is roughly the same proportion of the sanctioned money utilised the same time last year.

Sewage infrastructure

- About half the money, or Rs. 2,814 crore, had been spent on establishing sewage infrastructure. Only 24 of the 65 'entry-level' projects — meant for cleaning the ghats and establishing new ones and cleaning the river front and the river surface — had been completed. They had been allotted Rs. 492 crore.
- Ministry officials said that while delays characterised several major projects, there had been an uptick in the tenders being

awarded in the last few months. Because of this, several of these projects would be rapidly completed in the year ahead.

- **Major Sources of Pollution:**
- About 12,000 MLD of sewage is emptied into the Ganga across 11 States, from Uttarakhand to West Bengal.
- At present, the capacity for sewage treatment is just 4,000 MLD; of this, 1,000 MLD is functional.
- Coursing 2,500 km, the Ganga is the longest river within India's borders.
- Its basin constitutes 26% of the country's land mass (8,61,404 sq. km.) and supports 43% of its population. Even as the basin spreads across 11 States, five are located along the river's main stem: Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal.
- Much of its pollution load — chemical effluents, sewage, dead bodies, and excreta — comes from these States.
- Though the industrial pollution, volume-wise, accounts for about 20%, its toxic and non-biodegradable nature has a disproportionate impact.
- The industrial pollutants largely emanate from tanneries in Kanpur and distilleries, paper mills and sugar mills in the Kosi, Ramganga and Kali river catchments.
- The municipal sewage, at a billion litres a day, accounts for 80% of the pollution load.

About NMCG:

National Mission for Clean Ganga(NMCG) was registered as a society on 12th August 2011 under the Societies Registration Act 1860.

- It acted as implementation arm of National Ganga River Basin Authority(NGRBA) which was constituted under the provisions of the Environment (Protection) Act (EPA),1986.
- NGRBA has since been dissolved with effect from the 7th October 2016, consequent to constitution of National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council).

The Act envisages five tier structure at national, state and district level to take measures for prevention, control and abatement of environmental pollution in river Ganga and to ensure continuous adequate flow of water so as to rejuvenate the river Ganga as below;

1. National Ganga Council under chairmanship of Hon'ble Prime Minister of India.
2. Empowered Task Force (ETF) on river Ganga under chairmanship of Hon'ble Union Minister of Water Resources, River Development and Ganga Rejuvenation.
3. National Mission for Clean Ganga(NMCG).
4. State Ganga Committees and
5. District Ganga Committees in every specified district abutting river Ganga and its tributaries in the states.

NMCG has a two tier management structure and comprises of Governing Council and Executive Committee.

- Both of them are headed by Director General, NMCG. Executive Committee has been authorized to accord approval for all projects up to Rs.1000 crore.
- Similar to structure at national level, State Programme Management Groups (SPMGs) acts as implementing arm of State Ganga Committees.
- Thus the newly created structure attempts to bring all stakeholders on one platform to take a holistic approach towards the task of Ganga cleaning and rejuvenation.

Green licence plates for e-vehicles

Why in News?:

The government has approved distinctive green licence plates for electric vehicles to encourage people to use electric vehicles. Such vehicles will be fitted with green licence plates bearing numbers in white fonts for private cars and yellow font for taxis.

Benefits:

The measure is aimed at promoting e-vehicle's use and the government is considering exemption from permits for such vehicles.

The purpose behind distinctive number plates is their easy identification for preferential treatment in parking, free entry in congested zones besides other proposed benefits like concessional toll.

Types of number plates:

- India, currently, has four kinds of number plates – white licence plates with numbers on black font for private cars, yellow plates with fonts in black for commercial vehicles, black plates with yellow font letters for self-driven rental vehicles and blue plates with white font letters for Embassies and High Commissions.
- Army vehicles, on the other hand, follow a different registration system given by the defence ministry, while vehicles of the President and governors have red licence plates with the national emblem.

FAME scheme:

- The Government started Faster Adoption and Manufacturing of Hybrid and Electric vehicles (FAME) scheme which provides incentives for purchasing electric vehicle.
- It is a part of the National Electric Mobility Mission Plan. The scheme envisages Rs 795 crore support in the first two fiscals starting with the current year.
- It is being administered by the Heavy Industries Ministry.

Tiny fossils to give clue about early Climate deals

Scientists have discovered tiny fossil shells that unveil details about the Earth's climate over half a billion years ago.

The research, published in the journal *Science Advances*, suggests that early animals diversified within a climate similar to that in which the dinosaurs lived.

This interval in time is known for the ‘Cambrian explosion’, the time during which representatives of most of the major animal groups first appear in the fossil record.

The animal groups include the first organisms to produce shells, and it is these hard-bodied fossils that the scientists used in their study.

Scientists have long thought that the early Cambrian Period was probably a greenhouse interval in the earth’s climate history, a time when there were no permanent polar ice sheets.

Cambrian climate

Until now, however, scientists have only had a sense of what the Cambrian climate was like because of the types of rock that were deposited at this time — while it has long been believed that the climate was warm, specific details have largely remained a mystery.

Data from the tiny fossil shells, and data from new climate model runs, show that high latitude (about 65 degree South) sea temperatures were in excess of 20 degrees Celsius.

This seems very hot, but it is similar to more recent, better understood, greenhouse climates like that of the Late Cretaceous Period.

Careful examination of these tiny fossils revealed that some of them have exceptionally well-preserved shell chemistry which has not changed since they grew on the Cambrian sea floor.

Many marine animals incorporate chemical traces of seawater into their shells as they grow. That chemical signature is often lost over geological time, so it’s remarkable that we can identify it in such ancient fossils.

ISRO develops Green Fuel

Scientists at the Indian Space Research Organisation (ISRO) have reported progress in the development of an environment-friendly propellant to power satellites and spacecraft.

The effort is to replace the conventional hydrazine rocket fuel, a highly toxic and carcinogenic chemical, with a greener propellant for future missions.

Initial tests by a research team at the Liquid Propulsion Systems Centre (LPSC) here have shown promising results in the formulation and associated tests of a propellant blend based on hydroxylammonium nitrate (HAN).

Due to its high performance characteristics, hydrazine has dominated the space industry as the choice of propellant for over six decades, despite its environment and health hazards and the challenges faced in its manufacturing, storage, ground handling and transportation.

The in-house formulation consists of HAN, ammonium nitrate, methanol and water.

While methanol was added to reduce combustion instability, the choice of AN was dictated by its capacity to control the burn rate and lower the freezing point of the propellant.

In a paper presented at the national conference on Future Directions in Propulsion, organised by the Aeronautical Society of India here, the researchers said the propellant formulation was tested for compatibility with four metal samples over a period of six months.

The LPSC is planning further tests in flight configuration.

Dedicated web portal to facilitate Film Shooting

The Film Facilitation Office is in the process of establishing a dedicated web portal that will disseminate information on filming locations and the facilities available in India for production/post production.

Accordingly, the portal will help potential production companies looking to shoot in India to obtain permissions, explore potential benefits (tangible and non-tangible) and obtain an overview of various locations in India that could benefit the storyline of the film under consideration.

Application - The portal will facilitate the acceptance of application for shooting feature films / TV & Web Reality shows and series and / or TV & Web shows and series in India, along with online payments and issuing permissions. Foreign Audio Visual Agencies intending to shoot documentary films / AV commercials in India would link to the Ministry of External Affairs (MEA) Web portal.

Locations – The portal would also provide information on locations and link to all State portals. It would capture detailed information pertaining to a particular location, resources or facilities available in a standardized format that would include basic location description, map, best time to shoot, connectivity, photographs, digital walk tour, permissions required, previous movies shot etc.

Co-production of Films: Financial incentives will be provided to film makers for production of films under Audio Visual Co-production treaties other countries. Support for funding will be taken from the dedicated corpus funds. Policy guidelines for optimum and effective use of funds are being prepared.

A global environment compact

Why in News?

The UN General Assembly has adopted a resolution to set up a working group for negotiations aimed at creating a Global Pact for the Environment, a legally binding international instrument.

About the resolution:

- The resolution requests UN Secretary-General Antonio Guterres to submit to the General Assembly a report that identifies and assesses possible gaps in international environmental law and environment-related instruments with a view to strengthening their implementation.
- It decides to establish an ad hoc open-ended working group to consider the report, and if deemed necessary, to consider the scope, parameters and feasibility of a Global Pact for the Environment.
- The resolution requests the current president of the General Assembly to appoint two co-chairs of the working group — one from a developing country and one from a developed country — to oversee its consultations.
- The resolution was sponsored by France and won the support of 143 countries.

- Iran, the Philippines, Russia, Syria, Turkey and the United States voted against it.
- Six other countries abstained while several states did not vote.

World Migratory Bird Day 2018

World Migratory Bird Day 2018 is being celebrated on May 12th this year.

World Migratory Bird Day 2018 theme: “Unifying Our Voices for Bird Conservation”.

About World Migratory Bird Day:

World Migratory Bird Day is celebrated each year to highlight the need for the conservation of migratory birds and their habitats. More than 300 events in more than 60 countries to mark World Migratory Bird Day 2018 will include bird festivals, education programmes, media events, bird watching trips, presentations, film screenings and a benefit concert to raise funds for international nature conservation.

Concerns:

Forty percent of all migratory birds are seeing their number in decline, with one in eight being threatened with global extinction. Major threats include habitat loss and degradation, collision with badly placed wind turbines and power lines, unsustainable harvesting and the illegal killing and taking of birds.

Conservation of migratory species:

Efforts to conserve migratory birds both globally and regionally are internationally coordinated by the Convention on the Conservation of Migratory Species of Wild Animals (CMS, also known as the Bonn Convention) and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). The two UN Environment-

administered treaties have been spearheading World Migratory Bird Day since 2006.

About the Convention on Migratory Species (CMS):

The Convention on the Conservation of Migratory Species of Wild Animals aims to conserve terrestrial, aquatic and avian migratory species throughout their range. CMS and its related Agreements on migratory birds bring together governments and other stakeholders to coordinate and further develop conservation policies, to ensure that all flyways in the world benefit from coordination mechanisms that promote cooperation at ground level among the countries involved.

It is under aegis of United Nations Environment Programme (UNEP).

About the African-Eurasian Migratory Waterbird Agreement (AEWA):

The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) is an intergovernmental treaty dedicated to the conservation of migratory waterbirds that migrate along the African-Eurasian Flyway. The Agreement covers 254 species of birds ecologically dependent on wetlands for at least part of their annual cycle.

NASA to send helicopter on Mars:

NASA currently has two cars roaming Mars — the Opportunity and Curiosity rovers. But the next one it will send there will carry a vehicle with a new approach for planetary exploration: a helicopter.

The space agency announced the decision Friday to add a small helicopter — about 4 pounds with a fuselage the size of a softball and blades that span just over 3 1/2 feet, tip to tip — to its Mars 2020 mission, which is to launch in July 2020 and arrive at Mars the following February.

For its trip to Mars, the helicopter will be packed on the underside of the rover. After the rover lands, the helicopter will be placed on the ground.

The rover will then drive some distance away — close enough to stay in radio contact, far enough to not be endangered by any mishaps.

Flying on the red planet is not easy. The thin air at the surface of Mars is the equivalent of being 100,000 feet above Earth — well beyond the limits of terrestrial helicopters — although the weaker gravity helps.

Two pairs of rotor blades will spin in opposite directions at nearly 50 revolutions per second. A prototype has been tested in a chamber that mimics the Martian atmosphere.

The \$55 million project is not part of the main Mars 2020 mission, which is to look for signs of past ancient life in the rocks of Mars. “It’ll be interesting to see what it is actually capable of doing,” Kenneth Farley, the mission’s project scientist, said of the helicopter.

Scout of the future

After the 30 days of testing are over, the helicopter will be left behind, and the rover will move on. On future missions, a helicopter could act as a scout to help a rover navigate or even bring samples.

The Mars copter is not the only such proposal NASA has considered.

A candidate in NASA’s New Frontiers competition would send a robotic drone to Titan, Saturn’s largest moon.

The quadcopter would be able to perform detailed explorations of the moon’s various terrains, including its seas of hydrocarbons. If NASA selects the mission over another finalist next year, it could possibly launch as soon as 2025. NY TIMES

Scheme for Capacity Building in Textile Sector

A meeting of stakeholders on Samarth – Scheme for Capacity Building in Textile Sector under the Skill India Mission was held in New Delhi today to familiarize the stakeholders about the scheme and its guidelines.

The meeting was chaired by Union Minister of Textiles, Smt Smriti Zubin Irani. The broad objective of the new scheme is to skill the youth for gainful and sustainable employment in the textile sector covering the entire value chain of textiles, excluding spinning and weaving.

The scheme, approved by the Cabinet Committee on Economic Affairs on 20th of December last year, is intended to provide demand driven, placement oriented National Skills Qualifications Framework (NSQF) compliant skilling programmes to incentivize and supplement the efforts of the industry in creating jobs in the textiles sectors.

The scheme targets to train 10 lakh persons (9 lakh in organised and 1 lakh in traditional sector) over a period of 3 years (2017-20), with an outlay of Rs. 1300 crore. The guidelines of the scheme were released on 23rd of April 2018.

The meeting was attended by the senior officials of the Textiles Ministry, institutions and organizations under it, representatives of textile industry, State Governments, training institutions among others.

MNRE issues National Wind-solar Hybrid Policy

Ministry of New and Renewable Energy has issued National Wind-Solar Hybrid Policy here today.

The objective of the policy is to provide a framework for promotion of large grid connected wind-solar PV hybrid system for efficient utilization of transmission infrastructure and land.

It also aims at reducing the variability in renewable power generation and achieving better grid stability.

On technology front the Policy provides for integration of both the energy sources i.e. wind and solar at AC as well as DC level.

The Policy also provides for flexibility in share of wind and solar components in hybrid project, subject to the condition that, rated power capacity of one resource be at least 25 per cent of the rated power capacity of other resource for it to be recognised hybrid project.

The Policy seeks to promote new hybrid projects as well as hybridisation of existing wind/solar projects.

The existing wind/solar projects can be hybridised with higher transmission capacity than the sanctioned one, subject to availability of margin in the existing transmission capacity.

The Policy provides for procurement of power from a hybrid project on tariff based transparent bidding process for which Government entities may invite bids. Policy also permits use of battery storage in the hybrid project for optimising the output and further reduce the variability.

It mandates the regulatory authorities to formulate necessary standards and regulations for wind-solar hybrid systems.

Benefits:

With significant capacity additions in renewables in recent years and with Hybrid Policy aiming at better utilisation of resources, it is envisaged that the Hybrid Policy will open-up a new area for availability of renewable power at competitive prices along with reduced variability.

A scheme for new hybrid projects under the policy is also expected shortly.

Environment Minister Launches Mobile App of GSDP

Emphasising that the Green Skill Development Programme (GSDP) will go a long way in reaping the demographic dividend in the country, Union Minister for Environment, Forest and Climate Change, Dr. Harsh Vardhan has said that the GSDP aims to get 80, 000 people imparted green skills and in filling the skill gaps in the environment sector.

Speaking after launching the Mobile App of Green Skill Development Programme (GSDP) at the Ministry premises here today, Dr. Harsh Vardhan pointed out that more than 30 programmes have been identified, which will be conducted in 84 institutions across the country.

BACKGROUND OF GSDP:

Realizing the need for developing the green skills, the Ministry of Environment, Forest & Climate Change (MoEF&CC) is utilising the vast

network and expertise of Environmental Information System (ENVIS) hubs and Resource Partners (RPs).

The Ministry has taken this initiative for skill development in the environment and forest sector to enable India's youth to get gainful employment and/or self-employment.

The programme endeavours to develop green skilled workers having technical knowledge and commitment to sustainable development.

It will help in the attainment of the Nationally Determined Contributions (NDCs), Sustainable Development Goals (SDGs), National Biodiversity Targets (NBTs), as well as Waste Management Rules (2016).

ENVIS RPs in Botanical Survey of India (BSI), Zoological Survey of India (ZSI) and their respective regional offices were the nodal Centres for the pilot programme.

The skilling programmes cover diverse fields such as pollution monitoring (air/water/soil), Sewage Treatment Plant, Effluent Treatment Plants and Common Effluent Treating Plants (STP/ETP/CETP) operation, waste management etc.

The duration of the courses ranges from 80 hours to 560 hours approx.