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Pradhan Mantri Awas Yojana - Urban

- The Government approved 708 proposals for construction of 3.61 lakh houses under Pradhan Mantri Awas Yojana - Urban (PMAY-U) in 2021.
- Launched in 2015, PMAY-U is a flagship Mission of Government of India being implemented by Ministry of Housing and Urban Affairs (MoHUA) that ensures a pucca house to all **eligible** urban households by 2022.
- All statutory towns as per Census 2011 and towns notified subsequently would be eligible for coverage under the Mission.
- PMAY-U addresses urban housing shortage among the Economically Weaker Section (EWS), Low Income Group (LIG) and Middle Income Group (MIG) categories including the slum dwellers.
- It has made a mandatory provision for the female head of the family to be the owner or co-owner of the house under this Mission.
- It provides assistance to the implementing agencies through States/UTs and Central Nodal Agencies (CNAs) for providing houses to all eligible families/ beneficiaries against demand for houses for about 1.12 crore.

- **Provisions** - The PMAY-U has the following provisions:
    1. In-situ Rehabilitation of existing slum dwellers using land as a resource through private participation
    2. Credit Linked Subsidy
    3. Affordable Housing in Partnership
    4. Subsidy for Beneficiary-led individual house construction/ enhancement

- **Area** - As per PMAY (U) guidelines, the size of a house for EWS could be up to 30 sq. mt. carpet area.
- However States/UTs have the flexibility to enhance the size of houses in consultation and approval of the Ministry.

Incredible India Tourist Facilitator Certification Programme

- Tourism Minister appreciated the Incredible India Tourist Facilitator Certification (IITFC) programme.

- IITFC Programme is a digital initiative of Ministry of Tourism (MoT) for the citizens of India to become a part of the booming Tourism Industry.
- It is an online programme where new age tourist facilitators can learn about tourism at their own time, space, path and pace.
- The successful completion of this programme would enable the learner to become a Certified Tourist Facilitator of Ministry of Tourism.

First CAR-T Cell Therapy

- The Chimeric Antigen Receptor T-cell (CAR-T) therapy emerged as a breakthrough in cancer treatment.
- So, the IIT Bombay and Tata Memorial Hospital, Mumbai in collaborated t0 conduct the early phase pilot clinical trial of the "first in India" CAR-T therapy.
- The CAR-T cells were designed and manufactured at Bioscience and Bioengineering (BSBE) department of IIT Bombay. This work is partly supported by BIRAC-PACE scheme.
- The TMC-IIT Bombay team are further supported to extend this project for conducting Phase I/II trial of their CAR-T product by DBT/BIRAC, through National Biopharma Mission.
- The development of CAR-T cell technology for diseases including acute lymphocytic leukemia, multiple myeloma, glioblastoma, hepatocellular carcinoma and type-2 diabetes is supported through DBT.
- **Challenges** - Though this technology has a good therapeutic potential for cancer patients, at present this technology is not available in India.
- The challenge is to develop the CAR-T therapy in cost-effective manner and make it available for the patients (currently, it costs 3-4 crore INR).
- The manufacturing complexity is a major reason for the therapy cost.
- National Biopharma Mission is also supporting the development of,
    1. Lentiviral vector manufacturing facility for packaging plasmids used to transfer the modified T cell inside the body,
    2. cGMP facility for T-cell transduction and expansion for CAR T-cell manufacturing to 2 other organizations.

Aducanumab

- Aducanumab (Aduhelm), from the company Biogen, is the new drug approved by the US Food and Drug Administration (FDA) for treating Alzheimer's disease.
- **Working** - Aduhelm is not a cure, but it slows down cognitive decline.
- Alzheimer's disease causes the accumulation of the debris caused by the breakdown of neurons in the brain, leading to plaque formation.
- So, Aducanumab is a monoclonal antibody that is designed to reduce the

presence of amyloid beta, a protein that forms plaques in the brain.
- Aducanumab aims at altering the course of the disease by slowing the deterioration of brain function by reducing plaque formation.
- **Efficacy** - Aduhelm was tested in patients at the earliest stages of Alzheimer's before the disease had a major impact in their ability to care for themselves.
- So the FDA has asked Biogen to test the drug in people who had progressed to moderate dementia - a state in which the patients lose the ability to care for and feed themselves.

Alzheimer's disease

- Dementia is an umbrella term for a range of conditions that involve a loss of cognitive functioning.
- Alzheimer's dementia is the most common type and involves plaques and tangles forming in the brain.
- **Symptoms** - Forgetfulness and memory problems are early symptoms.
- But as the illness progresses, patients tend to become confused, may lose their way around familiar places, and have difficulties with planning and completing simple tasks.
- The disease is basically an accelerated ageing of certain neurons in the brain that are concerned with storage and processing of memory.
- **Estimates** - According to World Health Organization (WHO) estimates for 2017, dementia affects approximately 50 million people worldwide.
- This is projected to grow to 82 million by 2030.
- In India, it is estimated that 5.3 million people (1 in 27) above the age of 60 have dementia in 2020, as per the Dementia in India 2020 report (published by the Alzheimer's and Related Disorders Society of India).
- This is projected to rise to 7.6 million by 2030.

Chemical Weapons Convention

- The Chemical Weapons Convention (international chemical weapons watchdog) told the U.N. Security Council that Syria had likely or definitely used chemical weapons in 17 cases.
- The Chemical Weapons Convention is officially known as the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction.
- It is an arms control treaty administered by the Organisation for the Prohibition of Chemical Weapons (OPCW), an intergovernmental organization based in The Hague, The Netherlands.
- This multilateral treaty entered into force in 1997. It has 192 state parties and 165 signatories. **India** signed the treaty in 1993.

- The Chemical Weapons Convention prohibits,
    1. Large-scale use, development, production, acquisition, stockpiling, or retention of chemical weapons and their precursors
    2. Transferring of chemical weapons and their precursors
    3. Assisting other States to indulge in activities that are prohibited by the CWC
    4. Using riot-control devices as 'warfare methods'.
- The convention allows the above for very limited purposes (research, medical, pharmaceutical or protective).
- Main obligation of member states under the convention is to effect this prohibition, as well as the destruction of all current chemical weapons.
- All destruction activities must take place under OPCW verification.

Organisation for the Prohibition of Chemical Weapons

- Headquartered in The Hague, Netherlands, it is an independent, autonomous international organisation that implements the Chemical Weapons Convention (CWC).
- It has a working relationship with the United Nations (UN).
- By the Relationship Agreement (2001) between the OPCW and the UN, the OPCW reports on its inspections and other activities to the UN through the office of the Secretary General.
- Functions of the Organisation include,
    1. Performs inspections to verify that signatory states are complying with the convention. This includes a commitment to grant inspectors full access to chemical weapons sites.
    2. Performs testing of sites and victims of suspected chemical weapons attacks.
    3. Provides for assistance to and protection of States attacked or threatened with chemical weapons, cooperation in the peaceful use of chemicals.
- It was awarded Nobel Peace Prize in 2013.

Aircraft Turbulence

- Eight passengers on board a Boeing 737-800 flight from Mumbai to Kolkata suffered injuries after the flight encountered severe turbulence.
- The civil aviation regulator, Directorate General of Civil Aviation (DGCA), has classified the event as an "**incident**", which means that it will investigate the causes behind its occurrence.
- **Turbulence** - Turbulence means disruption of airflow over the wings of an airplane, which causes it to enter an irregular vertical motion.
- There are at least 7 kinds of turbulence which an aircraft can face.

1. Turbulence can be weather-related, in which the plane flies through a thunderstorm or a heavy cloud, or
2. Clear air turbulence, which is mainly caused by wind or jet streams.
3. Wake turbulence, which forms behind an aircraft when it flies through air, creating wingtip vortices.

- **Severity of turbulence** -It depends on the nature and intensity of the turbulence. Aircraft face some form of turbulence on a regular basis, and pilots are trained to deal with these disturbances.
- In several cases, intense turbulence has been the main cause of an accident. But there are other contributory factors too.
- The other factors include lack of proper training, poor dissemination of weather- or wind-related information.
- **Advice** - According to the US Federal Aviation Administration (FAA), passengers can easily prevent injuries from unexpected turbulence by keeping their seat belt buckled at all times.
- The FAA advises passengers to listen to instructions given by the flight attendants. This same advice is often given by pilots and flight attendants on Indian domestic flights.
- The FAA also recommends certain points that the carriers should follow.

Source: PIB, The Hindu, The Indian Express

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