

## General Studies- 1

### Asian Games:

The 18th edition of Asian Games is being held in Jakarta, Indonesia.

### Key facts:

- For the first time, eSports, a form of competition using video games, and canoe polo will be contested as demonstration sports.
- This will be the second time that Indonesia hosts the Asian Games.
- This will be the first time that the Asian Games will be held in two cities – Jakarta and Palembang.

### About Asian Games:

- The Asian Games, also known as Asiad, is a continental multi-sport event held every four years between athletes from all over Asia.
- Since 1982, the Games have been organised by the Olympic Council of Asia (OCA). Prior to that, the Games were regulated by the Asian Games Federation (AGF).
- The Games are the second largest multi-sport event after the Olympic Games.
- The last edition of the Games was hosted by Incheon, South Korea in October 2014.

### “International Buddhist Conclave 2018”

The President of India Shri Ram Nath Kovind will inaugurate the **“International Buddhist Conclave (IBC), 2018”** in Vigyan Bhawan, New Delhi on 23<sup>rd</sup> August, 2018.

**About IBC 2018:**

International Buddhist Conclave 2018 will have a religious / spiritual dimension, an academic theme and a diplomatic and business component.

IBC-2018 will feature presentations by the Ministry of Tourism and State Governments, Panel discussion between scholars and monks and B2B meetings between the foreign and Indian tour operators.

The Ministry has also planned to organize an ‘Investors’ Summit’ during the Conclave to attract investments in developing world class infrastructure at Buddhist sites.

**Theme of IBC:**

**“Buddha Path – The Living Heritage”.**

**Aims of IBC:**

- India has a rich ancient Buddhist Heritage with several important sites associated with the life of Lord Buddha. The Indian Buddhist Heritage is of great interest to the followers of Buddhism the world over.
- The aim of the Conclave is to showcase and project the Buddhist Heritage in India and boost tourism to the Buddhist sites in the country and cultivate friendly ties with countries and communities interested in Buddhism.

The most precious gift that the Ancient India has given to the World is, the Buddha and his Path, which is, the Eight-fold Path, in Pali language, Aṭṭhangiko Maggo.

**What is Eight Buddha Path?**

- The Buddha Path provides quality of life based on Values as moral principles, or other ideas that guide our choices; Right beliefs, connection to nature and place with spirituality; Way of Life, daily practices, good habits and inspiring traditional skills for mental growth, thereby, making it the Living Heritage.
- On the other hand, the ‘Buddha Path’ also refers to the Eight Great Places of Buddhist Heritage, (referred in Pali as Aṭṭhamahāṭhānāni).

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- These Eight Places are connected with the important events of the life of the Buddha from the time of his Birth, Enlightenment, Teaching Dhamma to suffering humanity, till he passed away, Mahāparinirvāna, at the age of 80 years.
- After Buddha attained Nirvana these places came to be associated with the Path of Buddhism.
- This Buddha Path is the Living Heritage that still continues to inspire millions of people to walk and find out Peace, Happiness, Harmony and Solace. We Indians very much value this extraordinary legacy of the Buddha and take pride in it.

## **General Studies-2**

### **Caspian Sea Agreement**

#### **Context:**

Leaders from Russia, Azerbaijan, Iran, Kazakhstan and Turkmenistan have finally signed a legal convention on ways to manage Caspian sea and its surrounding areas.

#### **About Caspian Sea:**

The Caspian Sea is a geopolitically strategic body of water, both in terms of its location and its resources.

Situated in a transcontinental zone between Europe and Asia, it has historically been a key trade and transit corridor between eastern and western powers.

The Caspian Sea became even more important in the modern era after the discovery of significant energy resources, including over 50 billion barrels of oil and 9 trillion cubic meters of natural gas in proven or probable reserves.

#### **Outcomes of the latest summit:**

The convention signed at the recent summit has confirmed that the surface of the Caspian Sea would be legally classified as a sea, meaning each country would control 15 nautical miles of water from its shoreline for mineral exploration and 25 natural miles of shoreline for fishing.

All other parts of the Caspian Sea would be considered neutral waters for common use. The summit also produced important security decisions, including an agreement that military vessels from non-Caspian states would be prohibited from entering the sea.

#### **Impact:**

This is a boon for both Russia and Iran, who have long had concerns about a U.S. or NATO military presence increasing Western influence, particularly over Azerbaijan. The agreement does not prevent the shipment of military cargo through the Caspian, though, since both

Azerbaijan and Kazakhstan have played logistical supply roles for U.S. and NATO forces in Afghanistan.

### **Exercise Maitree 2018**

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

Exercise Maitree 2018, a two week long platoon level joint military exercise between Indian Army and Royal Thai Army culminated on 19 August 2018.

#### **About Maitree Ex:**

- The Exercise Maitree is an annual event designed to strengthen the partnership between Royal Thai Army and Indian Army and the exercise commenced on 06 August 2018 in Thailand.
- The exercise began with a cross training period involving familiarization training between two armies to evolve drills and procedures involved in counter insurgency & counter terrorist operations in urban, rural and jungle terrain under UN mandate.
- The initial days of field training also focused on familiarizing with each other's modus operandi, basic maneuvers and evolving joint drills.
- The second phase included practicing of various drills & tactical scenarios in counter insurgency environment, execution of tactical operations like search and destroy operation, house intervention and survival techniques.

Both the armies immensely benefitted from each other's expertise and experience in conduct of tactical level counter terrorist operations. The exercise helped in enhancing the cooperation between two armies & bonhomie between troops.

### **Successful Flight Test of ATGM 'HELINA'**

#### **Context:**

Indigenously developed Helicopter launched Anti-Tank Guided Missile 'HELINA' has been successfully flight tested from Army Helicopter at 1400hrs in the ranges of Pokhran, today.

**About HELINA:**

- The weapon system has been tested for its full range.
- The 'HELINA' weapon system released smoothly from the launch platform has tracked the target all through its course and hit the target with high precision.
- All the parameters have been monitored by the telemetry stations, tracking systems and the Helicopters.
- The Missile is guided by an Infrared Imaging Seeker (IIR) operating in the Lock on Before Launch mode.
- It is one of the most advanced Anti-Tank Weapons in the world.

**[Advanced Medium Combat Aircraft](#)**

**Why in News?**

The Advanced Medium Combat Aircraft (AMCA), India's next indigenous fighter, is expected to make its first flight by 2032. Development work on the jet is under way.

**About AMCA:**

- The AMCA will feature geometric stealth and will initially fly with two GE-414 engines. Once we develop our own engine, it can be replaced with that.
- The plan is to build on the capabilities and expertise developed during the development of the light combat aircraft (LCA) and produce a medium fifth generation fighter aircraft.
- The aircraft will be powered by the same GE-414 engine on the LCA Mk-2 variant which is in the design phase.
- A GE-414 produces 98kN thrust compared to 84kN thrust of the GE-404 engine which is on the LCA Mk1.
- The basic design configuration has been frozen after wind tunnel testing and there are three critical technologies that need to be developed -- stealth, thrust vectoring and super cruise.

This is India's only fifth generation aircraft programme following the decision not to go ahead with the fifth generation project with Russia.

### **What is Stealth Technology?:**

There are two major ways of making a military platform stealthier.

- One is geometric stealth and other is material stealth.
- In geometric stealth, the shape of the aircraft is designed at such angles so as to deflect away maximum radar waves thereby minimising its radar cross section.
- In material stealth, radar-absorbing materials are used in making the aircraft which will absorb the radio waves thus reducing the radar footprint.
- The AMCA will initially be based on geometric stealth, we can look at material stealth at a later stage.

### **Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)**

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

TRIFED has made record procurement of tribal products worth Rs.204.88 Lakhs in the month of July, 2018 and cumulative procurement of Rs.769.36 Lakhs during the current financial year.

This is an increase of 864% during the month of July, 2018 and 511% during the current financial year in comparison to the procurement made in the corresponding period of the last financial year.

#### **About TRIFED:**

- Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) is a national-level apex organization functioning, since 1987, under the administrative control of Ministry of Tribal Affairs, Government of India.
- It strives to promote the economic development of the Tribal communities of the country through marketing development and sustained upgradation of their skills and products.

#### **Approach of TRIFED:**

- The approach involves capacity building, imparting need-based trainings, exploring marketing possibilities for products in national

as well as international markets, brand building & creating opportunities for marketing on sustainable basis.

- In essence, TRIFED's sole objective is to bring about a multi-dimensional transformation of the tribal society and a shift in the perception of their existing image.

### **NCRB**

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

A high-level meeting was recently convened to discuss recommendations on ways to curb "sexual violence" videos involving women and children.

#### **Outcomes of the meeting:**

- It was decided in the meeting that the National Crime Records Bureau (NCRB) would be the designated nodal agency for monitoring the complaints received on a government portal that records child pornography and sexual violence videos.
- The NCRB would coordinate with service providers such as Facebook, YouTube and WhatsApp and ask them to block malicious videos and contents.

#### **About NCRB:**

- NCRB is the Nodal Agency for authentic source of Data on crime, accidents, suicides, and prisons for policy matters and research.
- It was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It was set up based on the recommendations of the National Police Commission (1977-1981) and the MHA's Task force (1985).
- It was set up by merging the Directorate of Coordination and Police Computer (DCPC), Inter State Criminals Data Branch of CBI, Central Finger Print Bureau of CBI, and Statistical Branch of BPR&D.

**Objectives:**

1. Create and maintain **secure sharable National Databases** on crimes and criminals for law enforcement agencies and promote their use for **public service delivery**.
2. Collect and process crime statistics at the national level and clearing house of information on crime and criminals both at National and International levels.
3. Lead and coordinate development of IT applications and create an enabling IT environment for Police organizations.
4. National repository of fingerprints of all criminals.
5. To evaluate, modernize and promote automation in State Crime Records Bureaux and State Finger Print Bureaux .
6. Training and capacity building in Police Forces in Information Technology and Finger Print Science.

**Pradhan Mantri Awaas Yojana**

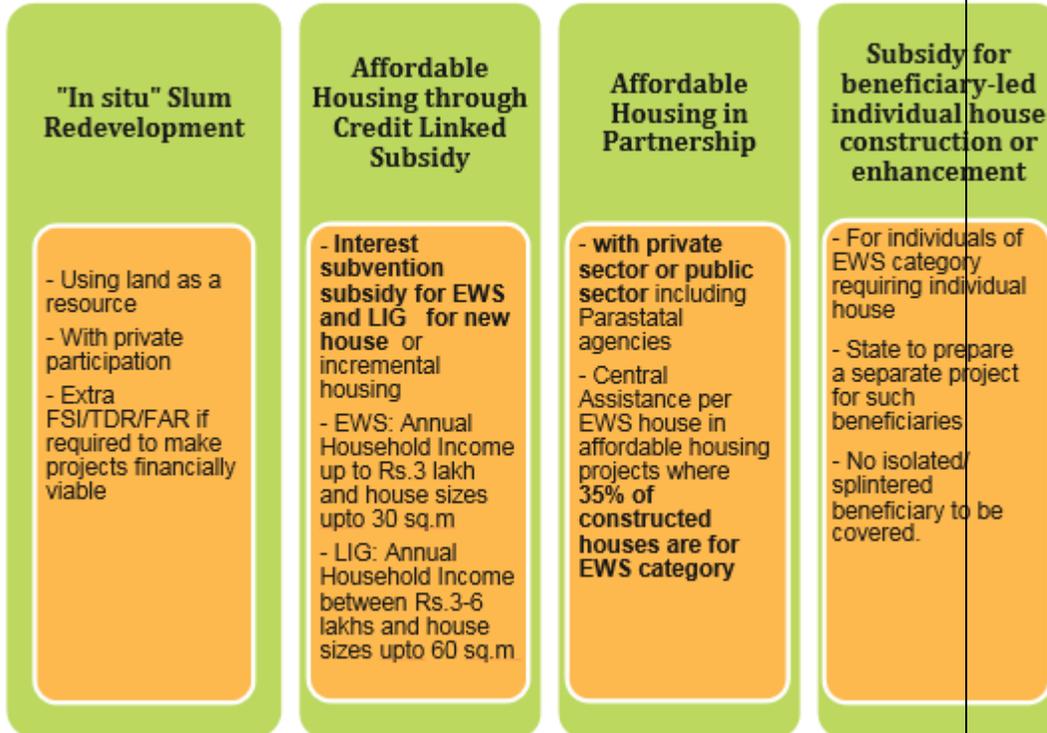
The Prime Minister, Shri Narendra Modi, today joined thousands of people in witnessing the collective e-Gruhpravesh of beneficiaries of the Pradhan Mantri Awaas Yojana (Gramin) at a large public meeting in Jujwa village of Valsad district in Gujarat.

**About PMAY:**

The Mission will be implemented during 2015-2022 and will provide central assistance to Urban Local Bodies (ULBs) and other implementing agencies through States/UTs for:

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.

Credit linked subsidy component will be implemented as a Central Sector Scheme while other three components will be implemented as Centrally Sponsored Scheme (CSS).



### Finance

The government has approved an investment of ₹439.22 billion (US\$6.4 billion) for construction of 6,83,724 houses for urban poor including central assistance commitment of ₹100.50 billion (US\$1.5 billion) by April 2016.

### Eligibility criteria

Condition for PMAY:

- Beneficiary max age 70 years,
- EWS (Economic Weaker Section) annual income Less than Rupees 3 Lac and LIG (Lower Income Group) Annual Income 3,00,001 to 6,00,000 Lac INR as well as Mid Income group since Feb 2017, and

(c) The beneficiary should not have an own dwelling unit on the name of any family member in any part of India.

The houses given under this scheme will be owned by females or jointly with males.

### **International Relations:**

#### **Quad grouping**

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

A report on the policy recommendations on Indian Ocean security by four think tanks from the Quad countries has been unveiled.

#### **Important recommendations:**

- Maintain the momentum of high-level consultations among the Quad countries with the aim of “free and open Indo-Pacific region” and progressively move it to a political level.
- Australia, Japan, India and the US should work with countries in the IOR to help maintain independent security and economic policies by supporting high-quality alternatives to unilateral Chinese investments and political alignment with Chinese regional objectives.
- The four countries should work to oppose the establishment of permanent Chinese military bases in the IOR. This should include demonstrating to China that its security needs can be met through cooperation and consultation with other nations and without the recourse to a “disruptive unilateral military presence.”
- Naval fleets should evolve increasingly long range operations. This may require consideration in Japan of new options such as nuclear propulsion for its submarines.

**The Quad:**

- Regional coalition known as the 'Quad', the quadrilateral formation includes Japan, India, United States and Australia.
- All four nations find a common ground of being the democratic nations and common interests of unhindered maritime trade and security.
- The idea was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it.

**Indo-China Summit:**

Raksha Mantri Smt Nirmala Sitharaman met State Councilor and Defence Minister of China Gen. Wei Fenghe, here today.

The Chinese Defence Minister is on an official bilateral visit to India from 21- 24 August 2018.

**Outcome of Summit:**

- The two Ministers held extensive discussions on bilateral defence related engagement as well as regional and international developments in a free, frank and constructive manner.
- They welcomed recent exchanges between their Armed Forces which had enhanced mutual trust and understanding to implement the consensus reached between Prime Minister Shri Narendra Modi and President Xi Jinping at the Informal Summit in Wuhan.
- It was decided to expand the engagement between their Armed Forces relating to training, joint exercises and other professional interactions.
- Both sides also decided to work towards a new bilateral MoU on Defence Exchanges and Cooperation to replace the MoU signed in 2006.
- It was agreed to work towards full implementation of ongoing confidence building measures as well as greater interactions at the working level to ensure the maintenance of peace and tranquillity, including early operationalisation of the Hotline between the relevant departments of their Armed Forces.

### What is CBM?

- **Confidence-building measures (CBMs) or confidence- and security-building measures** are in actions taken to reduce fear of attack by both (or more) parties in a situation of tension with or without physical conflict.
- The term is most often used in the context of international politics, but is similar in logic to that of [trust](#) and [interpersonal communication](#) used to reduce conflictual situations among human individuals.

### How it Emerged?

- CBMs emerged from attempts by the [Cold War](#) superpowers and their military alliances (the [North Atlantic Treaty Organisation](#) and the [Warsaw Pact](#)) to avoid nuclear war by accident or miscalculation.
- However, CBMs also exist at other levels of conflict situations, and in different regions of the world although they might not have been called CBMs.

### National Logistics Portal

#### Why in News?

A National Logistics Portal is being developed by the Ministry of Commerce and Industry to ensure ease of trading in the international and domestic markets. The portal will link all the stakeholders of EXIM, domestic trade and movement and all trade activities on a single platform.

#### Significance:

The portal will be implemented in phases and will fulfil the commitment of the Government of India to enhance trade competitiveness, create jobs, boost India's performance in global rankings and pave the way for India to become a logistics hub.

**India's logistics sector:**

India's logistics sector is highly defragmented and the aim is to reduce the logistics cost from the present 14% of GDP to less than 10% by 2022.

India's logistics sector is very complex with more than 20 government agencies, 40 partnering government agencies (PGAs), 37 export promotion councils, 500 certifications, 10000 commodities, 160 billion market size.

It also involves 12 million employment base, 200 shipping agencies, 36 logistic services, 129 ICDs, 168 CFSs, 50 IT ecosystems and banks & insurance agencies. Further, 81 authorities and 500 certificates are required for EXIM.

### **General Studies- 3**

#### **Ban on Petcoke**

##### **Context:**

India has banned the import of pet coke for use as fuel, but has allowed shipments for use as feedstock in some industries.

##### **What is allowed?**

Import of pet coke is allowed for only cement, lime kiln, calcium carbide and gasification industries, when used as the feedstock or in the manufacturing process on actual user condition.

##### **Background:**

- As the world's largest consumer of pet coke, India imports over half its annual pet coke consumption of about 27 million tonnes, mainly from the United States. Local producers include Indian Oil Corp, Reliance Industries and Bharat Petroleum Corp.
- India is the world's biggest consumer of petroleum coke, which is a dark solid carbon material that emits 11% more greenhouse gases than coal. Usage of pet coke, a dirtier alternative to coal, in the energy-hungry country has come under scrutiny due to rising pollution levels in major cities.

##### **What is petcoke?**

Petroleum coke, the bottom-of-the-barrel leftover from refining Canadian tar sands crude and other heavy oils, is cheaper and burns hotter than coal. But it also contains more planet-warming carbon and far more heart- and lung-damaging sulphur.

#### **OSIRIS-REx spacecraft**

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

The OSIRIS-REx spacecraft has begun its final approach toward the big near-Earth asteroid Bennu. The milestone also marks the official start of OSIRIS-REx's "asteroid operations" mission phase.

OSIRIS-REx is still about 1.2 million miles (2 million kilometers) from Bennu and won't arrive in orbit around the 1,650-foot-wide (500 meters) space rock until Dec. 3.

**About the mission:**

OSIRIS-Rex stands for Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer.

OSIRIS-REx is the third mission in NASA's New Frontiers program, which previously sent the New Horizons spacecraft zooming by Pluto and the Juno spacecraft into orbit around Jupiter.

**What will the OSIRIS-Rex do?**

OSIRIS-REx will spend two years travelling towards Bennu, arriving at the asteroid in August 2018. The probe will orbit the asteroid for 3 years, conducting several scientific experiments, before returning to Earth, with the sample capsule expected to land in Utah, USA in September 2023.

**Scientific Mission Goals:**

- During its three year orbit of Bennu, OSIRIS-REx will be conducting a range of scientific experiments in order to better understand the asteroid.
- As part of this, the asteroid will be mapped using instruments on the probe, in order to select a suitable site for samples to be collected from.
- The aim of the mission is to collect a sample of regolith- the loose, soil-like material which covers the surface of the asteroid.
- In July 2020, the probe will move to within a few metres of Bennu, extending its robotic arm to touch the asteroid's surface. The arm will make contact with the surface for just 5 seconds, during which a blast of nitrogen gas will be used to stir up the regolith, allowing it to be sucked into the sample collector.
- OSIRIS-REx has enough nitrogen on board for 3 sample collection attempts, and NASA are hoping to collect between 60 and 2000g of regolith material to bring back to Earth.

### What is Benu?

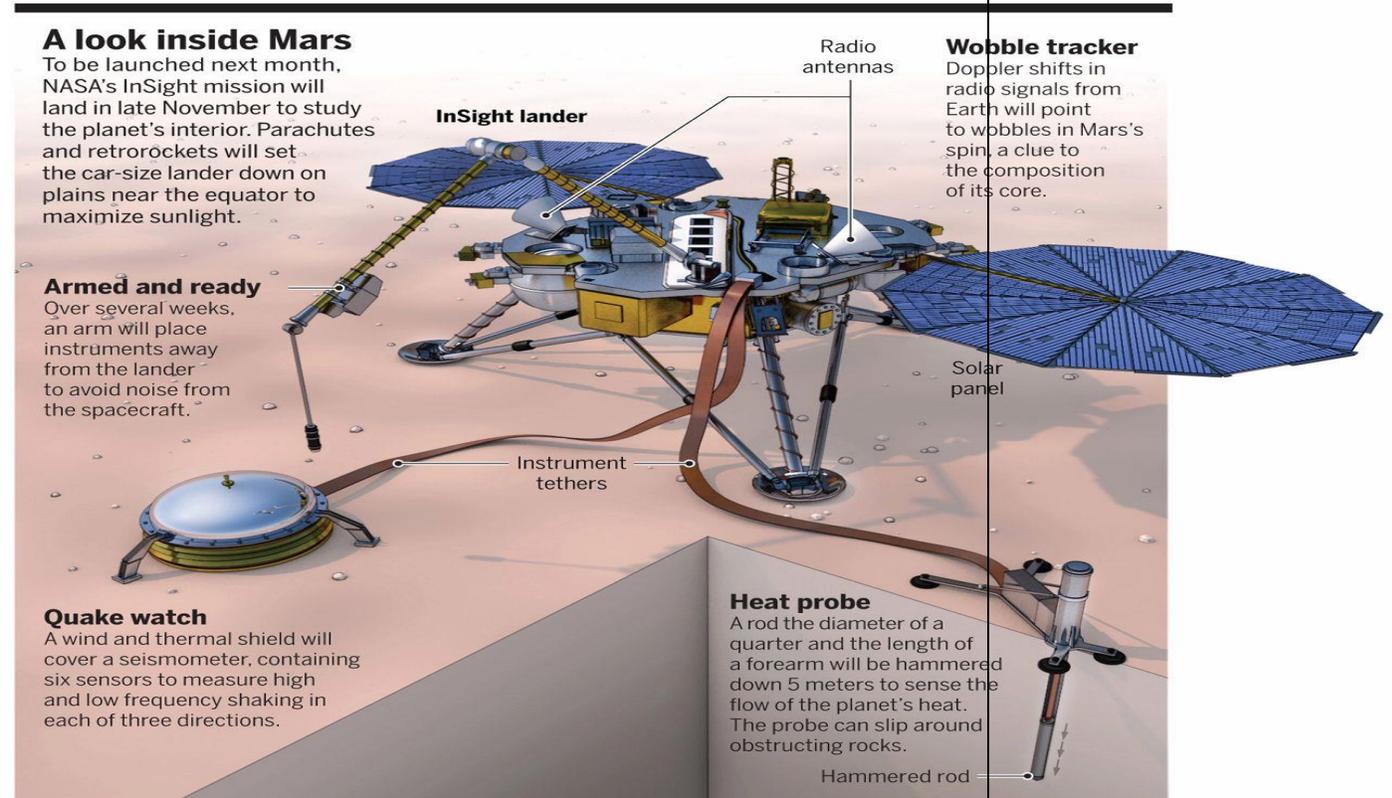
- **01955 Benu** (provisional designation 1999 RQ<sub>36</sub>)[\[11\]](#) is a [carbonaceous asteroid](#) in the [Apollo](#) group discovered by the [LINEAR](#) Project on September 11, 1999.
- It is a [potentially hazardous object](#) that is listed on the [Sentry Risk Table](#) with the second-highest cumulative rating on the [Palermo Technical Impact Hazard Scale](#).
- It has a cumulative 1-in-2,700 chance of impacting Earth between 2175–2199.
- It is the planned target of the [OSIRIS-REx](#) mission which is intended to [return samples](#) to Earth in 2023 for further study.
- 101955 Benu has a mean diameter of approximately 492 m (1,614 ft; 0.306 mi) and has been observed extensively with the [Arecibo Observatory](#) Planetary Radar and the [Goldstone Deep Space Network](#).

### Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight)

#### Why in News?

NASA's InSight spacecraft, en route to land on Mars this November, has passed the halfway mark, covering 277 million kilometres since its launch 107 days ago. In another 98 days, it will travel another 208 million kilometres and touch down in Mars' Elysium Planitia region, where it will be the first mission to study the Red Planet's deep interior.

## About InSight Mission:



## Significance of the mission:

- The findings of Mars' formation will help better understand how other rocky planets, including Earth, were and are created. But InSight is more than a Mars mission – it is a terrestrial planet explorer that would address one of the most fundamental issues of planetary and solar system science – understanding the processes that shaped the rocky planets of the inner solar system (including Earth) more than four billion years ago.
- By using sophisticated geophysical instruments, InSight would delve deep beneath the surface of Mars, detecting the fingerprints of the processes of terrestrial planet formation, as well as measuring the planet's "vital signs": Its "pulse"

(seismology), “temperature” (heat flow probe), and “reflexes” (precision tracking).

- InSight seeks to answer one of science’s most fundamental questions: How did the terrestrial planets form?

### **Chandrayaan- 1**

#### **Context:**

Scientists have found frozen water deposits in the darkest and coldest parts of the Moon’s polar regions using data from the Chandrayaan-1 spacecraft, that was launched by India 10 years ago.

Scientists used data from NASA’s Moon Mineralogy Mapper (M3) instrument to identify three specific signatures that definitively prove there is water ice at the surface of the Moon.

#### **What is Moon Mineralogy Mapper (M3) instrument?**

- M3, aboard the Chandrayaan-1 spacecraft, launched in 2008 by the Indian Space Research Organisation (ISRO), was uniquely equipped to confirm the presence of solid ice on the Moon.
- It collected data that not only picked up the reflective properties we would expect from ice, but was able to directly measure the distinctive way its molecules absorb infrared light, so it can differentiate between liquid water or vapour and solid ice.

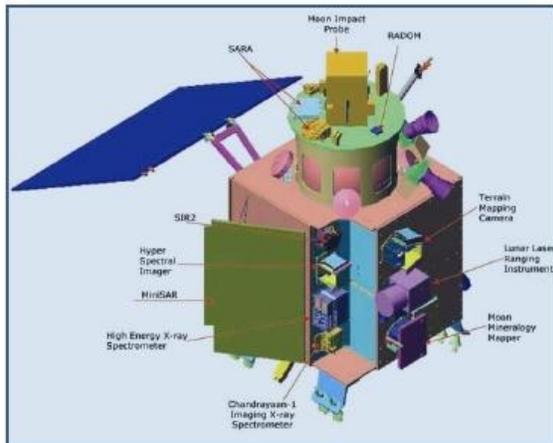
#### **Highlights of the findings:**

- With enough ice sitting at the surface — within the top few millimetres — water would possibly be accessible as a resource for future expeditions to explore and even stay on the Moon, and potentially easier to access than the water detected beneath the Moon’s surface.
- The ice deposits are patchily distributed and could possibly be ancient. At the southern pole, most of the ice is concentrated at lunar craters, while the northern pole’s ice is more widely, but sparsely spread.

- Most of the new-found water ice lies in the shadows of craters near the poles, where the warmest temperatures never reach above minus 156 degrees Celsius. Due to the very small tilt of the Moon's rotation axis, sunlight never reaches these regions.

### About Chandrayaan-1:

## Strategic Perspectives and Technical Architecture Overview of Indian Space Exploration Missions Chandrayaan-1 Mission



#### Objectives:

- Place an unmanned spacecraft in polar orbit around the moon
- Conduct mineralogical and chemical mapping of the entire lunar surface (95%)
- Upgrade technological base for future planetary missions

**Orbit:** Lunar Polar Orbit at 100 KM Circular  
Launched by Indian PSLV XL.

**Timeline:** Oct 22, 2008 - Aug 29, 2009

#### Spacecraft:

Basic architecture derived from the IRS satellite bus, Spacecraft weight 1380 kg.

Single solar panel generated 700 W power.

Onboard liquid engine with 440 N performed orbit raising maneuvers.

Eleven Science Instruments (six foreign)

### UDAN scheme

The centre has unveiled the draft International Air Connectivity (IAC) scheme.

### Key highlights:

Target: The scheme envisages to increase the international ticketing to 20 crore by 2027.

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The scheme is to be made operational only for states, which demonstrate their commitment to implement and provide the requisite support for promoting operations under the scheme.

Identification of routes: According to the draft, state governments will identify the routes to be connected, and airline operators will assess demand on the identified routes and submit proposals for providing connectivity.

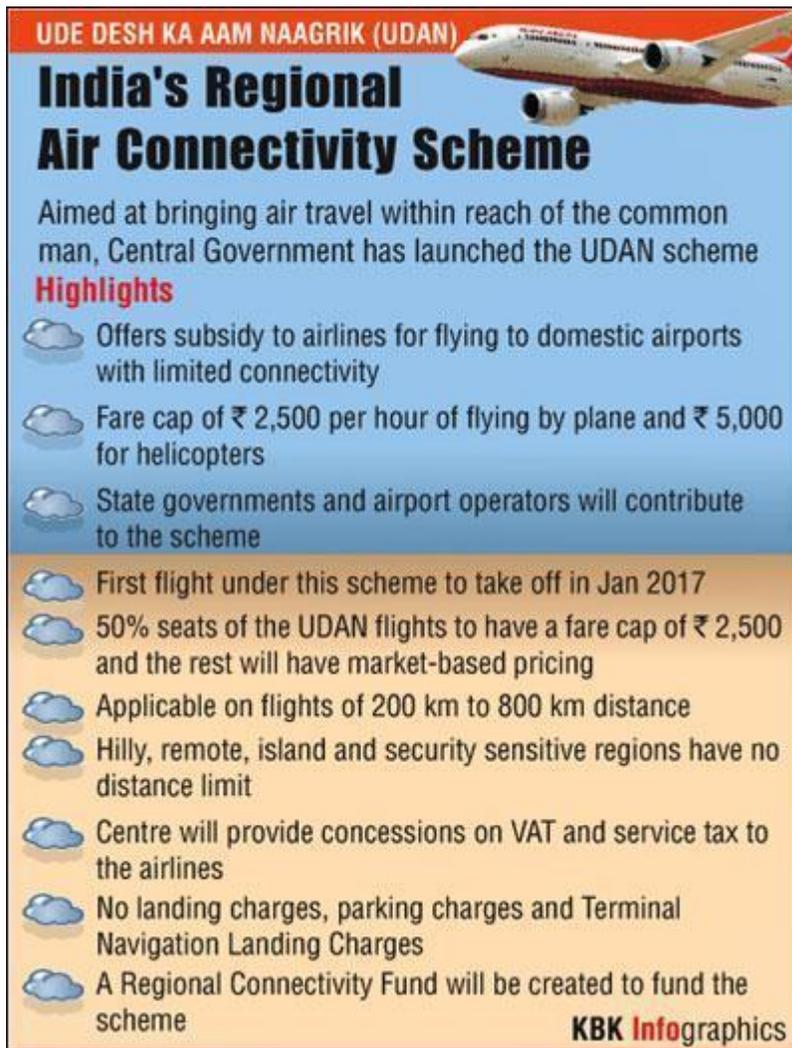
Permitted aircrafts: Operations under the scheme will be permitted through fixed-wing aircraft only with more than 70 seats.

The scheme has proposed to set up an International Air Connectivity Fund (IACF) — a dedicated fund for providing subsidy support under the scheme. It will be created through the contributions of state governments.

The subsidy support shall be provided to selected airlines only for the passenger seats, which remain unsold at the time of IAC flight operation, from the total number of passenger seats for which subsidy has been requested by the selected airline as part of its proposal. The subsidy support will be extended only up to three years.

The Airport Authority of India will be the implementing agency of the scheme.

### **Salient Features of UDAN**



**UDE DESH KA AAM NAAGRIK (UDAN)**

## India's Regional Air Connectivity Scheme

Aimed at bringing air travel within reach of the common man, Central Government has launched the UDAN scheme

**Highlights**

- Offers subsidy to airlines for flying to domestic airports with limited connectivity
- Fare cap of ₹ 2,500 per hour of flying by plane and ₹ 5,000 for helicopters
- State governments and airport operators will contribute to the scheme
- First flight under this scheme to take off in Jan 2017
- 50% seats of the UDAN flights to have a fare cap of ₹ 2,500 and the rest will have market-based pricing
- Applicable on flights of 200 km to 800 km distance
- Hilly, remote, island and security sensitive regions have no distance limit
- Centre will provide concessions on VAT and service tax to the airlines
- No landing charges, parking charges and Terminal Navigation Landing Charges
- A Regional Connectivity Fund will be created to fund the scheme

**KBK Infographics**

### Aeolus satellite

#### Why in News?

The European Space Agency (ESA) has successfully launched a satellite that will measure winds around the globe and help improve weather forecasting.

The Earth Explorer Aeolus satellite was launched into polar orbit on a Vega rocket from Europe's Spaceport in Kourou, French Guiana, at 21:20 GMT on August 22 (2:50 a.m. Indian Standard Time on August 23).

**Significance :**

- Using revolutionary laser technology, Aeolus will play a key role in our quest to better understand the workings of our atmosphere, the space agency said.
- Highlighted by the World Meteorological Organisation, the lack of direct global wind measurements is one of the major deficits in the Global Observing System.
- By filling this gap, Aeolus will give scientists the information they need to understand how wind, pressure, temperature and humidity are interlinked.
- This new mission will provide insight into how the wind influences the exchange of heat and moisture between Earth's surface and the atmosphere — important aspects for understanding climate change.

**Instruments Onboard:**

- Aeolus carries one of the most sophisticated instruments ever to be put into orbit.
- The first of its kind, the Aladin instrument includes revolutionary laser technology to generate pulses of ultraviolet light that are beamed down into the atmosphere to profile the world's winds — a completely new approach to measuring the wind from space.
- Although weather forecasts have advanced considerably in recent years, Aeolus will provide global wind profiles to improve the accuracy even further.
- In addition, its data will be used in air-quality models to improve forecasts of dust and other airborne particles that affect public health.

**Control Station:**

The satellite is being controlled from ESA's European Space Operations Centre in Germany.

Controllers will spend the next few months carefully checking and calibrating the mission as part of its commissioning phase

## **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**

### **Why in News?**

Insolvency and Bankruptcy Board of India (IBBI) Chairperson Dr. M. S. Sahoo inaugurated one-day refresher programme for insolvency professionals here today.

It is one of its kind in the country funded under Pradhan Mantri Kaushal Vikas Yojana (PMKVY).

### **About the Programme:**

- The programme focuses on ethics and conduct for IPs and recent developments in the insolvency and bankruptcy regime in India.
- It is expected that all IPs registered with the IBBI will participate in and benefit from this programme. There is no enrolment or course fee for participation in the programme.

### **What is PMKVY?**

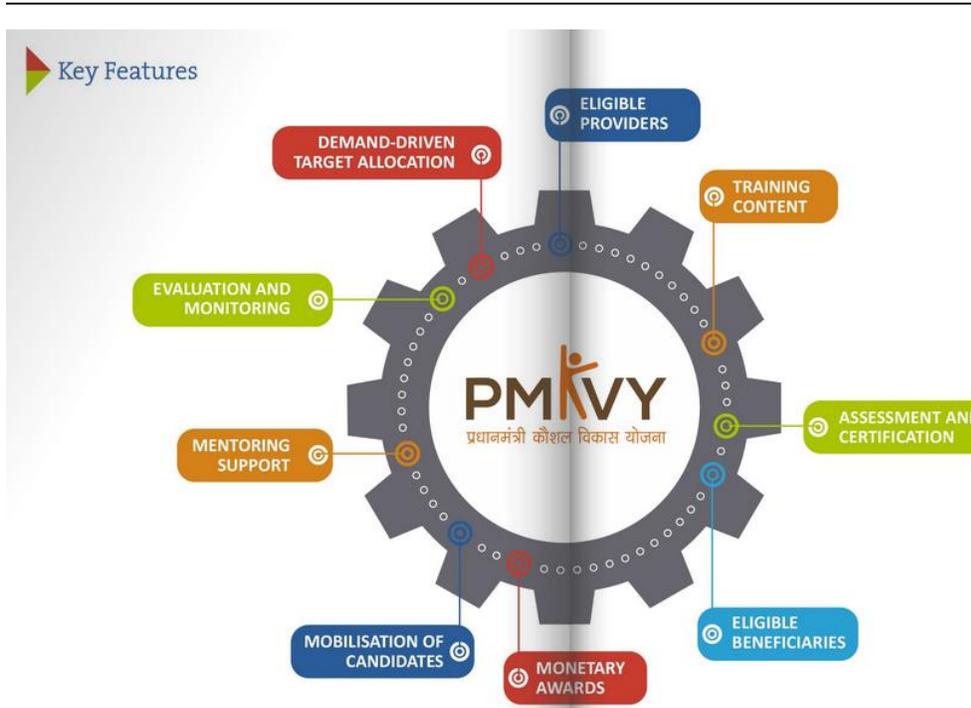
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE).

### **Objectives:**

The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.

Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).

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### Opening Ceremony Exercise SCO Peace Mission 2018

Exercise Shanghai Cooperation Organization (SCO) Peace Mission 2018, the latest in 'Peace Mission' series formally started on 24 August 2018 at Chebarkul, Russia.

#### What is it?

The SCO Peace Mission Exercise is one of the major defense cooperation initiatives amongst SCO nations and will be a landmark event in the history of SCO defence cooperation.

#### Benefits of Exercise:

The exercise will provide an opportunity to the armed forces of SCO nations to train in counter terrorism operations in urban scenario in a multinational and joint environment.

The scope of the exercise includes professional interaction, mutual understanding of drills & procedures, establishment of joint command and control structures and elimination of terrorist threat in urban counter terrorist scenario.

**Participant Militaries:**

The Russian Army has the major participation of 1700 personnel followed by China with 700 & India with 200 personnel.

**About SCO:**

# Shanghai Cooperation Organization

The Shanghai Cooperation Organization (SCO) is a regional intergovernmental security alliance involving Russia, China and four Central Asian states



**Milestones**

- 1996  
Foundation of the Shanghai Five, the SCO predecessor
- 1999  
Foundation of the Bishkek Group to counter border criminality
- 2001  
Uzbekistan joins SCO
- June 15, 2001  
Shanghai Cooperation Organization Founding Declaration signed
- 2008  
Iran submits official application for full-right SCO membership

**Basic documents**

- 2001  
Shanghai Convention on the Struggle against Terrorism, Separatism and Extremism
- 2002  
SCO Charter
- 2002  
Regional Anti-Terrorist Structure (RATS) Founding Agreement

**Goals and Objectives**

- Strengthening of mutual trust and good-neighborly policies between member states
- Promotion of effective cooperation in politics, trade, economics, science, technology, and culture, as well as education, energy, transport, tourism and environmental protection
- Jointly ensuring peace, security and stability in the region
- Advancement to a new democratic, fair and rational global political and economic order

**SCO Structure**

- Council of Heads of State
  - Council of Heads of Government
  - Council of Foreign Ministers
  - Meetings of Heads of Ministries and Departments
  - Council of National Coordinators
  - Regional Anti-Terrorist Structure
- Russian Foreign Ministry  
Ambassador-at-Large Vitaly Vorobyov is the  
Presidential Envoy for SCO Affairs

## **ICESat-2 satellite**

### **Why in News?**

NASA will shortly launch the Ice, Cloud and Land Elevation Satellite-2 (ICESat-2) mission to measure — in unprecedented detail — changes in the heights of Earth’s polar ice to understand what is causing ice sheets to melt fast.

### **About ICESat- 2 mission:**

- ICESat-2 will measure the average annual elevation change of land ice covering Greenland and Antarctica to within the width of a pencil, capturing 60,000 measurements every second.
- ICESat-2’s Advanced Topographic Laser Altimeter System (ATLAS) measures height by timing how long it takes individual light photons to travel from the spacecraft to Earth and back.

### **Objectives:**

- Measure melting ice sheets and investigate how this effects sea level rise.
- Measure and investigate changes in the mass of ice sheets and glaciers.
- Estimate and study sea ice thickness.
- Measure the height of vegetation in forests and other ecosystems worldwide.

### **Significance of the mission:**

- ICESat-2 will improve upon NASA’s 15-year record of monitoring the change in polar ice heights. It started in 2003 with the first ICESat mission and continued in 2009 with NASA’s Operation IceBridge, an airborne research campaign that kept track of the accelerating rate of change.
- The new observational technologies of ICESat-2 will advance the knowledge of how the ice sheets of Greenland and Antarctica contribute to sea level rise.



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