1. CHaracterising ExOPlanets Satellite (CHEOPS)

Why in News?

- Recently, European Space Agency has postponed the launch of CHEOPS.

Objectives of CHEOPS:

- It uses ultra-high precision photometry to measure accurate sizes of large sample of Earth to Neptune size planets. It also seeks to measure light curves of hot Jupiter to see how energy is transported in planetary atmosphere. It combines size measurements with existing planet masses to constrain their composition and Internal Structures.
- It identifies prime targets to search for the fingerprints of key molecules in the planet's atmospheres using future observatories on Earth.

About CHEOPS:

- It is a European Space Agency's space telescope.
- It aims to measure size of known transiting exoplanets and search for transits of exoplanets previously discovered via radial velocity.
- It is designed to study the composition and formation of extrasolar planets.
- It will observe bright stars that are already known to host planets.

2. Global Refugee Forum (GRF)

- Recently, the first Global Refugee Forum (GRF) is began at Geneva, Switzerland.

About GRF:

- It is jointly hosted by the United Nations High Commissioner for Refugees (UNHCR), the UN Refugee Agency, and the government of Switzerland.
- It will be held every four years at the Ministerial level.
- It aims to debate and discuss the response of the world countries to the Global refugee situation.
- It is been organised around six areas, such as burden- and responsibility-sharing, education, jobs and livelihoods, energy and infrastructure, solutions, and protection capacity.

About UNHCR:

- It is a global organization dedicated to saving lives, protecting rights and building a better future for refugees, forcibly displaced communities and stateless people.

3. Interconnect Usage Charge (IUC)

Why in News?

- Recently, Telecom Regulatory Authority of India (TRAI) deferred implementation of zero-interconnect usage charge regime by a year.

About IUC:

- Interconnect Usage Charge or IUC is a cost paid by one mobile telecom operator to another, when its customers make outgoing mobile calls to the other operator's customers. These calls between two different networks are known as mobile off-net calls.
- The objective of this calling-party pays regime (CPP) is to allow operators cover network usage costs. Since it needs infrastructure investment, the IUC ensures that operators make enough operations to keep their business viable.
- The IUC charges are fixed by Telecom Regulatory Authority of India (TRAI).

Implications and Criticism:

- As IUC directly impacts the call tariff, reduction in IUC is likely to yield consumer benefits through low call charges.
- Scrapping IUC helps to deploy new technologies like VoLTE (Voice over Long Term Evolution), migration to Internet Protocol networks by operators, wherein there are no interconnection charges. This is due to the fact the charges in 2G is higher than the 4G technologies.

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4. National Broadband Mission (NBM)

- Recently, the Union Minister for Communication has launched the National Broadband Mission.

About NBM:

- It will be accessible to all villages by 2022.
- Under it, the government laying of incremental 30 lakhs route km of Optical Fiber Cable.
- It also increases the tower density from 0.42 to 1.0 tower per thousand of population by 2024. It includes Investment from stakeholders of USD 100 billion including Rs 70,000 crore from Universal Service Obligation Fund (USOF).
- It develops a Broadband Readiness Index (BRI) to measure the availability of digital communications infrastructure and conducive policy ecosystem within a State/UT.

- It also creates digital fiber map of the Digital Communications network and infrastructure, including Optical Fiber Cables and Towers, across the country.
- It will also improve quality of services for mobile and Internet.

About Universal Service Obligation Fund (USOF):

- It is established in 2002.
- It is headed by the USOF Administrator who reports to the Secretary, Department of Telecommunications (DoT).
- Its funds come from the Universal Service Levy (USL) of 5% charged from all the telecom operators on their Adjusted Gross Revenue (AGR) which are then deposited into the **Consolidated Fund of India.**
- It is a non-lapsable fund that is the unspent amount under target financial year does not lapse, accrues for next years' spending. All credits to the fund require parliamentary approval and it has a statutory support under Indian Telegraph (amendment) act 2003.

5. Annular Eclipse of the Sun

Why in News?

- An annular eclipse of the Sun will occur on December 26, 2019.

Highlights:

- From India, the annular phase will be visible in the morning after sunrise from some places within a narrow corridor of the southern part of the country (parts of Karnataka, Kerala & Tamil Nadu) and it will be seen as partial solar eclipse from the rest part of the country. In India, the obscuration of the Sun by the Moon at the time of the greatest phase of the annular eclipse will be nearly 93%. As one moves towards the north and south of the country from the annular path, the duration of the partial eclipse decreases.
- The next solar eclipse will be visible from India on June 21, 2020. It will be an annular solar eclipse.

Solar Eclipse:

- A solar eclipse occurs on a new moon day when the Moon comes in between the Earth and the Sun and when all the three celestial bodies are aligned.
- An annular solar eclipse will occur when the angular diameter of the Moon falls short of that of the Sun so that it cannot cover up the latter completely. As a result, a ring of the Sun's disk remains visible around the Moon.

- The eclipsed Sun should not be viewed with the naked eye, even for a very short time. It will cause permanent damage to the eyes leading to blindness even when the moon covers most portions of the Sun.
- The safe technique to observe the solar eclipse is either by using a proper filter like aluminized Mylar, black polymer, welding glass of shade number 14 or by making a projection of Sun's image on a whiteboard by telescope.

6. Caterpillar fungus – the 'Himalayan gold'

Why in News?

- Trade and collection of 'Himalayan Gold' — caterpillar fungus has become extremely popular in Recent Times.

'Himalayan gold':

- Caterpillar fungus (Ophiocordyceps Sinensis) is a fungal parasite of larvae (caterpillars) that belongs to the ghost moth.
- It is endemic to the Tibetan Plateau, including the adjoining high Himalaya (3,200-4,500 metres above sea level).
- It is locally known as Kira Jari (in India), Yartsagunbu (in Tibet), Yarso Gumbub (Bhutan), Dong Chong Xia Cao (China) and Yarsagumba (in Nepal).
- In the Indian Himalayas, the species has been documented in the region from the alpine meadows of protected areas such as Nanda Devi Biosphere Reserve, Askot Wildlife Sanctuary, Kanchendzonga Biosphere Reserve and Dehan-Debang Biosphere Reserve.

Economic significance:

- For centuries, caterpillar fungus has seemingly been used in traditional Tibetan and Chinese medicine as a tonic, as a therapeutic medicine for lung, liver and kidney problems.
- In recent time the species has been widely traded as an aphrodisiac and a powerful tonic.
- There are also reports that caterpillar fungus possesses a range of more specific therapeutic properties; including action against asthma and bronchial inflammation, cure of renal complaints, irregular menstruation and stimulation of the immune system.

Harvesting and Trade:

- Harvesting of caterpillar fungus starts at the beginning of May and lasts till the end of June.

- The collection period, however, depends on factors such as weather, snow cover on the pasture and elevation of collection sites.
- The mean annual buying price by local traders in villages of the Nanda Devi Biosphere Reserve has increased steadily from approximately $4,700 (Rs 3.3 lakh) per kilogramme in 2006 to more than $13,000 per kg in 2015.
- Increasing trade-induced over-harvesting seems almost undoubtedly responsible for the declining populations of the Caterpillar Fungus.

7. GeM Samvaad

Why in News?

- Government e-Marketplace (GEM/GeM) launches National Outreach Programme – GEM Samvaad.

GeM Samvaad:

- A national outreach programme was launched by the Department of Commerce, Ministry of Commerce and Industry called the 'GeM Samvaad'.
- The outreach programme will take place with stakeholders across the country and with local sellers in order to facilitate on-boarding of local sellers on the marketplace while catering to specific requirements and procurement needs of buyers.
- GeM Samvaad is essentially a dialogue between buyers and sellers. Sellers and buyers can look for new opportunities also in this outreach programme.
- The outreach programme will take place from December 2019 to February 2020 and will cover all the States and UTs of the country.

GeM:

- It is the national public procurement portal offering end to end solutions for all procurement needs of Central and State Government Departments, PSUs, autonomous institutions and local bodies.
- Since its launch in 2016, it has transformed public procurement in the country by leveraging technology and making procurement contactless, paperless, and cashless.
- GeM has more than 15 lakh products and around 20,000 services, more than 3 lakh registered sellers and service providers and more than 40,000 government buyer organizations.

- State Departments and organisations, and public sector enterprises (PSEs) have been using GeM for their buying needs. Sellers from the States are also benefiting through access to the national public procurement market using the portal.
- GeM's vision is "to affect an evolution in public procurement promoting a transparent, efficient and inclusive marketplace."