

1. Telecom Regulatory Authority of India (TRAI)

Context:

- The Telecom Regulatory Authority of India (TRAI) has recently recommended that all Set Top Boxes (STBs) in the country must be made Interoperable.

About:

- It means that consumers should be able to use the same STB across different DTH (direct-to-home) or cable TV providers.
- STBs deployed in the cable TV networks are non-interoperable. It's in the DTH players comply with licence conditions to support common interface module based interoperability. So, in practice, they are also not readily interoperable.
- The **Issues due to the lack of interoperability**: It deprives the customer of the freedom to change her/his service provider, creates a hindrance to technological innovation and improvement in service quality and Hampers the overall sector growth.
- The Interoperable STBs within the cable TV segment and similarly within the DTH segment should be developed.

About Telecom Regulatory Authority of India:

- It was established by an Act of Parliament (Telecom Regulatory Authority of India Act, 1997) to regulate telecom services, including fixation/revision of tariffs for telecom services. It provides a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.
- The Act was amended to establish a Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) to take over the adjudicatory and disputes functions from TRAI.

2. Wayanad Wildlife Sanctuary

Context:

- Wayanad Wildlife Sanctuary is recently seen in news.

About Wayanad Wildlife Sanctuary:

- It is Located in Kerala, which is an integral part of the Nilgiri Biosphere Reserve. It was established in 1973.
- The Nilgiri Biosphere Reserve was the first from India to be included in the UNESCO designated World Network of Biosphere Reserves (designated in 2012).

- Mudumalai Wildlife Sanctuary, Bandipur National Park, Nagerhole National Park, Mukurthi National Park and Silent Valley are the other wildlife parks within the Reserve.
- It spread over 344.44 sq, which is contiguous to the tiger reserves of Nagerhole and Bandipur of Karnataka and Mudumalai of Tamil Nadu. The Kabini river (a tributary of Cauvery river) flows through the sanctuary.
- It includes forest types such as South Indian Moist Deciduous forests, West coast semi-evergreen forests and plantations of teak, eucalyptus and Grewelia.
- The major mammals are Elephant, Gaur, Tiger, Panther, Sambar, Spotted deer, Barking deer, Wild boar, Sloth bear, Nilgiri langur, Bonnet macaque, Common langur, Wild dog, common otter, Malabar giant squirrel etc.

3. CollabCAD tool to create 3D Computer Aided Designs

Why in News?

- Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC) jointly launched CollabCAD.

CollabCAD:

- It is a computer-enabled software system which provides a total engineering solution from 2D drafting & detailing to 3D product design.
- It helps the user to build models in virtual 3d space and create and engineering drawings for the shop floor which makes it a complete package for smart manufacturing.
- The aim of this initiative is to provide a great platform to students of Atal Tinkering Labs (ATLs) across the country to create and modify 3d designs with free flow of creativity and imagination.
- This software would also enable students to create data across the network and concurrently access the same design data for storage and visualization.

Atal Innovation Mission (AIM):

- The Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship across the length and breadth of the country.
- AIM's objectives are to create and promote an ecosystem of innovation and entrepreneurship across the country at school, university, research institutions, MSME and industry levels.

- At the school level, AIM establishes Atal Tinkering Labs (ATL) in all districts across India. ATLs provide tinkering spaces to children to hone their innovative ideas and creativity.
- At the university, NGO, SME and Corporate industry levels, AIM is setting up world-class Atal Incubators (AICs) that would trigger and enable successful growth of sustainable startups in every sector.

4. NASA's VIPER mission

Why in News?

- As a prelude to NASA's upcoming manned Artemis missions scheduled to start in 2024, NASA will be sending the golf-cart sized robot, VIPER (Volatiles Investigating Polar Exploration Rover), in 2023 to search for and map lunar resources (volatiles, minerals, and water ice) on the moon.

Highlights:

- Creating a map of the water ice on the moon will pave the way for future exploration and extraction missions. Water ice will be a critical resource for future exploration and colonization, not only for sustaining life (breathable oxygen) but also for deriving rocket fuel elements (hydrogen, oxygen).

VIPER Mission:

- The mission will target the south pole region of the moon (landing site to be determined), where previous NASA missions have confirmed water ice to be present, especially in the cold permanent shadow areas of craters.
- Once at the south pole, VIPER's operating radius will be several kilometers, where it will explore various types of soils (areas of constant light, partial light, and complete darkness).
- The rover will need to be robust enough to handle the extreme cold in the permanent shadow areas where temperatures never go above -250 F. The VIPER mission is planned to last approximately 100 days. VIPER will be outfitted with various equipment to perform its duties. First of all, to identify potential drilling spots, the Neutron Spectrometer System (NSS) provided by NASA will detect hydrogen underneath the surface from afar.
- Once a potential drilling spot has been identified, the rover will extract samples from down to 1-meter in depth by using The Regolith and Ice Drilling for Exploring New Terrain (TRIDENT) provided by Honeybee Robotics.

- Once extracted, VIPER will analyze the samples by using the Near InfraRed Volatiles Spectrometer System (NIRVSS) to determine the type of hydrogen (water molecule or hydroxyl).
- It will also analyze the volatile and mineral composition by using the Mass Spectrometer Observing Lunar Operations (MSolo).

5. The Nihangs

Why in News?

- The Patiala incident, in which a group of Nihangs attacked a Punjab police party when stopped for a curfew pass, and the subsequent seizure of weapons and narcotics, has put the spotlight on the Nihangs.

Highlights:

- Etymologically the word nihang in Persian means an alligator, sword and pen but the characteristics of Nihangs seem to stem more from the Sanskrit word nihshank which means without fear, unblemished, pure, carefree and indifferent to worldly gains and comfort.

Nihangs:

- Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits. This order can be traced back to the creation of the Khalsa by Guru Gobind Singh in 1699.
- As per an account by the East India Company's Colonel James Skinner, Khalsa Sikhs were divided into two groups: Those who put on blue attire which Guru Gobind Singh used to wear at the time of battle and those who do not follow any restrictions on the colour of their dress though both of them follow the profession of soldiery.
- Nihangs observe the Khalsa code of conduct in its strictest sense. They do not profess any allegiance to an earthly master. Instead of saffron they hoist a blue Nishan Sahib (flag) atop their shrines.
- The Nihangs are fond of a popular drink called shardai or sharbati deggh (sacrament drink) which contains grounded almonds, cardamom seeds, poppy seeds, black pepper, rose petals and melon seeds.

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- Nihangs had a major role in defending the Sikh panth after the fall of the first Sikh rule (1710-15) when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-65).
 - The Nihangs today constitute a small community. For the whole year they remain stationed at their respective deras (centres) but set out on their annual pilgrimage of Anandpur Sahib, Damdama Sahib Talwandi Sabo and Amritsar, take part in religious events and exhibit their martial skills and horsemanship.

