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## **1. The SuperCam on Mars 2020 Rover**

### **Why in News?**

- NASA is planning to send a robot named **SuperCam** aboard the Mars 2020 rover to study rocks and look for signs of past life on Mars.

### **Key Points:**

- The robot uses a camera, laser and spectrometers for studying mineralogy and chemistry from up to about 7 metres away.
- SuperCam's laser is uniquely capable of remotely clearing away surface dust, giving all of its instruments a clear view of the targets. It can also fire a laser to study rock targets smaller than a pencil point.
- It will look at rock textures and chemicals to find those that formed or changed in the water on Mars' long ago. It will measure the air so that the scientists can learn about how atmospheric molecules, water ice, and dust absorb or reflect solar radiation. This data improves our ability to predict Martian weather.

### **Mars 2020 Rover:**

- NASA is planning to launch Mars 2020 rover by this year (2020).
- It has been designed to better understand the geology of Mars and seek signs of ancient life. The mission will collect and store a set of rock and soil samples that could be returned to Earth in the future.
- It will also test new technology to benefit future robotic and human exploration of Mars.

## **2. National Deworming Day (NDD)**

### **Why in News?**

- The Ministry of Health & Family Welfare conducts the tenth round of the National Deworming Day (NDD).

### **National Deworming Day (NDD):**

- As part of this campaign, children and adolescents aged 1-19 years are being administered Albendazole (400 mg) across government, government-aided schools, anganwadis, private schools and other Educational Institutions.
- The NDD is implemented with an objective to reduce the prevalence of Soil Transmitted Helminths (STH), commonly called the parasitic intestinal worms, among all children and adolescents.

- Infections with the main STH – roundworm, whipworm and hookworms – contribute to 50.1 lakh disability adjusted life-years (DALYs) worldwide (WHO, 2010). One DALY can be thought of as one lost “healthy” year from a life.
- In India, over 22 crore children under 14 years are at risk of STH infections (WHO, 2017).
- Launched in 2015, the NDD is the largest public health program implemented on a single day reaching crores of children and adolescents through two NDD rounds every year.
- NDD will be observed in 34 States/UTs over weeks and is expected to reach an estimated 30 crore of the target population.
- Implemented in collaboration with the Ministry of Women and Child Development and Ministry of Human Resource Development, NDD is a key intervention of Anemia Mukh Bharat.
- In preparation for the NDD rounds, Anganwadi workers and teachers are trained on community mobilization and administration of deworming tablet.
- Deworming through Albendazole is an evidence-based, globally-accepted, effective solution used to control worm infections in all children.

### **3. Exercise AJEYA WARRIOR – 2020**

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

- The Fifth Edition of the Joint Military Exercise AJEYA WARRIOR – 2020 between India and the United Kingdom will be conducted at Salisbury Plains, United Kingdom in February 2020.

#### **Exercise Ajeya Warrior:**

- The joint military exercise will comprise of 120 soldiers each from the Indian and United Kingdom Army who would be sharing their experiences gained during conduct of various counter insurgency and counter terrorist operations in the past.
- The aim of this exercise is to conduct company level joint training with emphasis on counter terrorists operation in urban and semi-urban areas. Training on modern weapon systems, equipment and simulator training have also been planned.
- The Exercise is conducted alternatively in the United Kingdom and India.
- The First Edition of the exercise was conducted in 2013 at Belgaum, Karnataka.

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## **4. Jet streams and their role**

### **Why in News?**

- A British Airways flight broke the subsonic speed record during its New York-to-London journey, surpassing the previous record by 17 minutes, and completing the trip 80 minutes sooner than estimated.

### **Highlights:**

- The Boeing 747-436 plane was able to achieve a speed of 1,327 kph as it was aided by a strong jet stream generated due to Storm Ciara. Other flights travelling across the North Atlantic from west to east also experienced shorter travel times.

### **Jet Streams:**

- Jet streams are narrow bands of strong winds that flow over thousands of kilometres from west to east. Major jet streams are found near the upper levels of the atmosphere, around 9 to 16 km from the earth's surface, and can reach speeds of over 320 kph.
- The jet streams shift to the north or south depending on the season. During winters, the wind current is the strongest.
- They are also closer to the Equator during winter. The major jet streams are the Polar Front, Subtropical, and Tropical jet streams. In India, the Tropical jet stream influences the formation and duration of the summer monsoon.
- The polar jet streams form between the latitudes of 50 and 60 degrees north and south of the equator, and the subtropical jet stream is closer to the equator and takes shape at latitudes of 20 to 30 degrees.

### **Role of Jet Streams:**

- Jet streams play a key role in determining the weather because they usually separate colder air and warmer air.
- Jet streams generally push air masses around, moving weather systems to new areas and even causing them to stall if they have moved too far away.
- A strong jet stream can provide a potent tailwind to a flight travelling from west to east. This helps reduce the travel time for such flights, as their speeds are boosted.

## 5. 2 Billion Kilometres

### Why in News?

- Recently, United Nations High Commissioner for Refugees (**UNHCR**) has launched a global campaign calling on people all over the world to cover the distance travelled by refugees each year.

### About:

- **UNHCR** has traced the refugees around the world and calculated, that people forced to travel approximately **Two Billion Kilometres every year** to reach the first point of safety.
- In 2016, Syrian refugees travelled more than 240 kilometres to reach Turkey. South Sudanese refugees travelled more than 640 kilometres to reach Kenya and Rohingya refugees in Myanmar travelled approximately 80 kilometres to reach Bangladesh.
- It is a safety campaign, which invites people to act in solidarity and run, walk or cycle to achieve a cumulative total of two billion kilometres.

### About UNHCR:

- It is a UN Refugee Agency and a global organization dedicated to saving lives, protecting the rights and building a better future for refugees, forcibly displaced communities and stateless people.
- It is headquartered at Geneva, Switzerland.

## 6. Chindu Yakshaganam

### Why in News?

- Chindu Yakshaganam is recently seen in news.

### About Chindu Yakshaganam

- It is an age-old art form popular in **Telangana**, which dates back to second century BC.
- It is similar to Yakshaganam, a traditional theatre form particular to Karnataka.
- It is a theatre art form that combines dance, music, dialogue, costume, make-up, and stage techniques with a unique style and form.
- It is derived from the artistes' caste **Chindu Madiga**, a sub-caste of Madiga among SCs.
- It is also called Chindu Bhagavatam as most of the stories narrated are from '**Bhagavatam**'.

- **Bhagavatam:** It refers to the Bhagavata Purana which can be translated as 'the history of the devotees of Vishnu'
- The word **Chindu** means **jump** in Telugu.

## 7. Gaganyaan

### Why in News?

- Recently, Four Indian Air Force (IAF) pilots has been chosen as astronauts for India's first manned mission Gaganyaan.

### About:

- The Human Space Flight Centre of the Indian Space Research Organisation (ISRO) and the Russian government-owned Glavkosmos signed a contract for the training, which includes Russian support in the selection of candidates, their medical examination, and space training.
- They will study in detail the systems of the **Soyuz** manned spaceship, as well as be trained in short-term weightlessness mode aboard the **Il-76MDK** aircraft.
- **Il-76MDK:** It is a military transport plane specially designed for parabolic flights of trainee astronauts and space tourists.
- The **Soyuz** is a Russian spacecraft. It carries people and supplies to and from the space station.

### About Gaganyaan:

- The Gaganyaan programme will include two unmanned flights to be launched in December 2020 and July 2021 and one human space flight to be launched in December 2021.
- It is the India's first human spaceflight will carry 3 astronauts to a low earth orbit of 300 to 400 kilometres on board GSLV Mark III vehicle, for at least 7 days.
- ISRO is also launching test flights with humanoids by end of this year to conduct micro-gravity experiments. If successful, India would be the 4<sup>th</sup> country to send manned mission after the Russia, USA and China.

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## **8. World Pulses Day**

### **Context:**

- World Pulses day is celebrated by the Food and Agriculture Organization (FAO) to recognize the importance of pulses as a Global Food.

### **About:**

- The February 10, 2019 is celebrated as the first World Pulses Day.
- It has been designated by the **seventy-third** session of the **United Nations General Assembly on 2018**.
- The Year **2016** was celebrated as **International Year of Pulses** to highlight the contribution of Pulses to sustainable food production and towards food security and Nutrition.

