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Harlequin Ichthyosis

- Odisha reported its first-ever case of a baby born with harlequin ichthyosis in Ganjam district. India's first case was recorded in Nagpur, Maharashtra in 2016.
- The disease is an **extremely rare genetic disorder** that resulted in thickened skin forming over nearly the entire body at birth.
- **Causes** - The disease is caused due to mutations in the ABCA 12 gene (a mutated gene inherited from the parents).
- The ABCA12 protein plays a major role in transporting fats in cells which make up the outermost layer of skin.
- Severe mutations in the gene lead to the absence or partial production of the ABCA12 protein, which results in lack of lipid transport.
- **Symptoms** - The skin form large diamond-shaped plates across the body that are separated by deep cracks (fissures).
- The skin is dry and scaly, almost like fish skin and hence the term 'icthyosis' ('ikthus', Greek for fish).
- The facial features of the baby, including the mouth, eyes and ears may be deformed, which may restrict breathing and eating. The infants could not survive for long and succumbed to the disease days after birth.
- **Occurrence** - The disease affects one in three million births. There are around 200 to 250 such cases across the world.

FASTag and Right to Freedom of Movement

- The Union government told the Bombay High Court that making FASTag mandatory for all vehicles plying on the national highways (NHs) doesn't breach a citizen's fundamental right to freedom of movement in any way.
- According to the Central Motor Vehicles Rules, FASTag (electronic toll collection system) is mandatory for all vehicles at toll plazas on NHs.
- [Section 136A of Motor Vehicles Amendment Act, 2019 says that the Central Government should make rules for the electronic monitoring and enforcement of road safety.]
- The Centre said that provisions had been made at all toll plazas along national highways to fit the chip in vehicles that did not have FASTag.
- It also said that the double user fees or penalties imposed on vehicles

without FASTag on NHs were in accordance with National Highway Fee (determination of rates and collection) Rules, 2008.

FASTag

- FASTag is an electronic toll collection system that uses Radio Frequency Identification (RFID) technology.
- It is a tag fixed on the windscreen of the vehicle that allows automatic deduction of toll without stopping for carrying out the cash transaction.
- To know more about FASTag, click here.

Right to Freedom of Movement

- Article 19 of the Constitution guarantees Right to Freedom of movement.
- It gives every citizen the right to move freely throughout the country. It is protected against only state action and not private individuals.
- It is available only to the citizens and to shareholders of a company but not to foreigners or legal persons.
- **Restrictions** - Only be imposed on two grounds as per the Article 19 of the constitution, namely,
    1. Interests of the general public and
    2. Protection of interests of any scheduled tribe.
- While **Article 19** protects only the right to move inside the country, **Article 21** (Right to life and personal liberty) protects right to move out of the country and right to come back to the country.

SUPACE Portal

- The Supreme Court unveiled its Artificial Intelligence (AI) portal, the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE).
- A pet project of Chief Justice of India S A Bobde, SUPACE is a tool that collects relevant facts and laws and makes them available to a judge.
- The portal is not designed to take decisions, but only to process facts and to make them available to judges looking for an input for a decision.
- It is designed to make research easier for judges, thereby easing their workload.
- Initially, it will be used on an experimental basis by the judges of Bombay and Delhi High Courts who deal with criminal matters.

Thotlakonda Buddhist Site

- Historians and biologists campaign to protect the ancient Buddhist site of Thotlakonda - Home to around 90 species of birds.
- The site is found at a hill of Mangamaripeta Village, Bheemunipatnam Taluka

of Visakhapatnam District, Andhra Pradesh.

- **Significance of the site** - In 1976, during a helicopter survey by the Indian Navy to set up a naval facility, ruins of the Buddhist site were spotted.
- Subsequently, the entire hill was declared as an area comprising a protected monument under the Andhra Pradesh Ancient and Historical Monument and Archaeological Sites and Remains Act, 1960.
- The State Archaeology Department's excavation (1988-1992) found,
    1. Ancient pottery such as tan ware, black red ware,
    2. Coins from the Satavahana period and Roman coins,
    3. Labels with Brahmi inscriptions, Inscribed Chhatra pieces,
    4. Terracotta and glass beads, bangles,
    5. Stuccos and stone sculptural remains.
- It gave a clear indication that the area housed remnants of a flourishing monastery, practising **Hinayana Buddhism**, which was most active for 400 years from 200 BCE to 200 CE.
- To know more about Thotlakonda Buddhist Site, click here.

Zhurong

- Chinese government announced that its first Mars rover will be named Zhurong after a traditional fire god. This name fits with the Chinese name for Mars - "Huo Xing" or fire star.
- The rover is aboard the Tianwen-1 probe that arrived in Mars orbit in February, 2021 and is due to land in May to look for evidence of life.
- The top candidate for the landing site on Mars is Utopia Planitia, a rock-strewn plain where the U.S. lander Viking 2 touched down in 1976.
- **Tianwen-1's Goals** - To analyse and map the Martian surface and geology, look for water ice, study the climate and surface environment.
- China would become the third country after the former Soviet Union and the United States to put a robot rover on Mars.

State of the Global Climate 2020

- This annual report is released by the World Meteorological Organization.
- It has found that the lockdowns and shutdowns to curb the Covid-19 pandemic would lower emissions and reduce the impact on climate.
- **Double blow** - According to the report, extreme weather combined with Covid-19 in a double blow for millions of people in 2020.
- However, the pandemic-related economic slowdown failed to put a brake on climate change drivers and accelerating impacts.
- **Temperature** - It reiterates that 2020 was one of the three warmest years on record, despite a cooling La Niña event.

- The global average temperature was about 1.2° Celsius above the pre-industrial (1850-1900) level. The six years since 2015 have been the warmest on record. 2011-2020 was the warmest decade on record.
- The WMO report listed five key indicators of irreversible changes in the global climate - Greenhouse gases, oceans, sea-level rise, the Arctic and the Antarctica.

Five Key Indicators

- **Greenhouse Gases (GHGs)** - Despite the economic slowdown due to the pandemic, emission of major GHGs increased in 2019 and 2020. It will be higher in 2021.
- **Oceans** - In 2020, the oceans had the highest heat content on record. Over 80% of the ocean area experienced at least one marine heatwave.
- The percentage of the ocean that experienced strong marine heat waves (45%) was greater than that which experienced moderate marine heat waves (28%).
- **Sea-level rise** - Since record-taking started in 1993 using the satellite altimeter, sea-level has been rising partly due to the increased melting of the ice sheets in Greenland and Antarctica.
- However, there was a blip in summer of 2020 that recorded a drop in sea level, which is due to the La Niña induced cooling.
- **The Arctic -** The 2020 Arctic sea-ice extent minimum after the summer melt was 3.74 million square kilometre, marking only the second time on record that it shrank to less than 4 million sq km.
- In the Siberian Arctic, temperatures in 2020 were more than 3°C above average, with a record temperature of 38°C in the town of Verkhoyansk.
- **The Antarctica** - The Antarctic sea-ice extent remained close to the long-term average. However, the Antarctic ice sheet has exhibited a strong mass loss trend since the late 1990s.
- This trend accelerated around 2005 due to the increasing flow rates of major glaciers in West Antarctica and the Antarctic Peninsula.

Lockdown Generation

- The International Labour Organization (ILO) termed the current young population as the ‘lockdown generation’ citing the massive impacts of the pandemic on them.
- The lockdown generation emerged, as young people constitute major victims of social and economic consequences of the pandemic, and there is a risk that they will be scarred throughout their working lives.
- According to ILO and various other estimates, during the pandemic,
    1. Some 90% of young people have reported increased mental anxiety,

2. One in six young people worldwide have lost their jobs.

Source: The Hindu, The Indian Express, Down To Earth, Frontline

