

**COVID- 19 NEWS****Coronavirus ‘Copy Machine’**

Researchers have reported that they have determined the 3D structure of coronavirus “copy machine”. This makes it possible to investigate how drugs such as remdesivir work.

**About:**

- Once the novel coronavirus SARS-CoV2 invades a human cell, the crucial next stage is replication, when it creates copies after copies of itself. For this, the virus uses its “copy machine”, which is an enzyme with this function.
- The first stage of infection is the virus entering the human cell. On the surface of the virus is a spike-shaped protein, the so-called “corona”, which binds itself to a human cell enzyme, ACE2.
- The virus then acidifies compartments on the cell surface, enters, and then begins to replicate using the body’s own mechanism.
- SARS-CoV2 is made of a single strand of RNA, which is what is copied and recopied. Enzymes that enable the creation of RNA (or DNA) are called polymerases; in the case of SARS-CoV2, the polymerase is called RdRp, also named nsp12.
- It is the polymerase whose structure researchers have now described.

**GEOGRAPHY- PHYSICAL AND ECONOMIC****Asteroid 1998 Or2**

On 29 April 2020, the asteroid (52768) 1998 OR2 passed at a distance of 0.042 AU (6.3 million km) from Earth.

**About:**

- (52768) 1998 OR2 (provisional designation 1998 OR2) is an asteroid on an eccentric orbit with a diameter of 2 kilometers.
- It is a member of the dynamical Amor group of near-Earth asteroids.
- It was discovered in 1998, by astronomers of the Near-Earth Asteroid Tracking (NEAT) program at the Haleakala Observatory, Hawaii.
- It is one of the brightest and therefore largest potentially hazardous asteroids known to exist.

**Zaskar River**

Wadia Institute of Himalayan Geology (WIHG), an autonomous institute under the Department of Science & Technology, Govt. of India, studied rivers in Ladakh Himalaya, bringing out 35 thousand-year history of river erosion and identified hotspots of erosion and wide valleys that act a buffer zones.

**About:**

- The Ladakh Himalaya forms a high altitude desert between Greater Himalayan ranges and Karakoram Ranges. The Indus and its tributaries are major rivers flowing through the terrain.
- In the study published, Zaskar catchment was explored by WIHG team to understand the landform evolution in transitional climatic zone.

**Zaskar River**

- The Zaskar River is a north-flowing tributary of the Indus.
- It is one of the largest tributaries of the upper Indus catchment, draining orthogonally through highly deformed Zaskar ranges.
- Two prominent tributaries of Zaskar River are the Doda and Tsrapping Chu, which confluence at Padam village in the upper valley to form the Zaskar River.

**INTERNATIONAL AFFAIRS- BILATERAL, GROUPINGS, ORGANISATIONS****Global Report On Food Crises (GRFC) 2020**

According to the 2020 Global Report on Food Crises (GRFC), up to 135 million people were living in food crises in 2019 – up from 113 million a year earlier.

**About:**

- At 135 million, the number of people in Crisis or worse (IPC/CH Phase 3 or above) in 2019 was the highest in the four years of the GRFC's existence.
- An estimated 75 million stunted children were living in the 55 food-crisis countries analysed.
- Conflict/insecurity was still the main driver of food crises in 2019, but weather extremes and economic shocks became increasingly significant.
- Over half of the 77 million acutely foodinsecure people in countries where conflict was identified as the primary driver were in the Middle East and Asia.
- Africa had the largest numbers of acutely food-insecure people in need of assistance in countries badly affected by weather events, particularly in the Horn of Africa and Southern Africa, followed by Central America and Pakistan.

**Related Info :**

- The Global Report of food crises is produced each year by the Global Network Against Food Crises, which is made up of international humanitarian and development partners.

**India's Permanent Mission To The United Nations**

India has appointed diplomat T S Tirumurti, currently serving as Secretary in the Ministry of External Affairs, as its Permanent Representative to the United Nations.

**About:**

- The Permanent Mission is the diplomatic mission that every member state deutes to the United Nations, and is headed by a Permanent Representative, who is also referred to as the “UN ambassador”.
- UN Permanent Representatives are assigned to the UN headquarters in New York City, and can also be appointed to other UN offices in Geneva, Vienna, and Nairobi.
- According to Article 1 (7) of the Vienna Convention on the Representation of States in their Relations with International Organizations of a Universal Character, a “Permanent Mission” is a: “mission of permanent character, representing the State, sent by a State member of an international organization to the Organization”.

**Related Info:**

- India was among the select members of the United Nations that signed the United Nations Declaration at Washington on January 1, 1942. India also participated in the historic UN Conference of International Organization at San Francisco from April 25 to June 26, 1945.

**SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC****UV Blaster**

The Defence Research and Development Organisation (DRDO) has developed an Ultraviolet (UV) Disinfection tower for rapid and chemical-free disinfection of high infection-prone areas.

**About:**

- The equipment named UV Blaster is “useful for high-tech surfaces like electronic equipment, computers and other gadgets in laboratories and offices that are not suitable for disinfection with chemical methods.
- The product is also effective for areas with a large flow of people such as airports, shopping malls, metros, hotels, factories and offices.
- It was designed and developed by Laser Science & Technology Centre (LASTEC) based in Delhi with the help of New Age Instruments and Materials Private Limited, Gurugram.
- For a room of about 12 ft x12 ft dimension, the disinfection time is about 10 minutes.

**PRELIMS SPECIFIC FACTS- INDICES, DAYS, EVENTS, AWARDS ETC****Bicentenary Of The Birth Of Florence Nightingale**

Florence Nightingale, the founder of modern nursing, was born 200 years ago.

**About:**

- Florence (1820 – 1910) was born to a wealthy English family in Florence, Italy, and named after the city.
- She became famous as a result of her innovations in nursing care at Scutari hospital in modern-day Istanbul, where she treated British soldiers wounded in the Crimean War of 1854, in which British, French and Ottoman forces fought the Russian Empire.
- Every night she would make rounds through the camps, checking on each soldier, a practice that saw her nicknamed the “Lady with the Lamp”.
- She used statistics as a way of proving the effectiveness of different interventions. She produced her famous “rose” diagrams, which demonstrated the high proportion of deaths caused by disease as opposed to battle wounds.
- As a result of this work, she became the first woman admitted to the London Statistical Society, in 1858.

**Related Info:**

- International Nurses Day is celebrated on May 12 to commemorate her birthday.
- In India, on the occasion of International Nurses Day, the National Florence Nightingale Awards are given to the outstanding nursing personnel employed in Central, State/UTs. Nurses working in Government, Voluntary Organizations, Mission institutions. Private institutions can apply with the due recommendation of concerned State Government.

**ODISHA DEVELOPMENT****NLC India Limited**

NLC India Limited has for the first time, commenced production of Coal. The coal produced from Talabira II and III Mines in the state of Odisha, which was allotted to NLCIL in 2016 with a capacity of 20 Million Tonne per annum will be used to meet its requirement of its existing and future coal fired power plants.

**About:**

- NLC India Limited (formerly Neyveli Lignite Corporation Limited) (NLC) is a ‘Navratna’ Public Enterprise under the Ministry of Coal.
- It works in the fossil fuel mining sector in India and thermal power generation. It annually produces about 30 million tonne lignite from opencast mines at Neyveli in the state of Tamil Nadu in southern India and at Barsingsar in Bikaner district of Rajasthan state.
- It was incorporated in 1956 and is headquartered in Neyveli, Tamil Nadu.

**DAILY ANSWER WRITING PRACTICE**

**Qns. The phenomenon of reverse-migration poses various challenges in front of the administration. Discuss its overall impact on the economy and society.**

**Ans**

The International Organization for Migration defines a migrant as any person who is moving or has moved across an international border or within a state away from his/her habitual place of residence.

The lockdown since the Covid-19 outbreak has caused the mass exodus of migrant workers from industrial hubs towards their native places with the fear of livelihood loss. This has been termed as reverse migration.

Statistics of migrant workers

- The Economic Survey of India 2017 estimates that the magnitude of inter-state migration in India was close to 9 million annually between 2011 and 2016.
  - According to the Census 2011 the total number of internal migrants in the country (inter- and intra-state movement) at a staggering 139 million.
  - The Hindi belt is the main source of migrants as four states, Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh accounted for 50% of India's total inter-state migrants. Delhi and Mumbai are widely considered migrant magnets.

Impact of reverse migration

- Lack of employment: It is one of the biggest drivers of migration.
  - According to the Centre for Monitoring Indian Economy (CMIE) unemployment rate in rural areas is 23.7% and in states like Bihar and Jharkhand, it is highest in the country. Workers are returning home after 40 days of joblessness with drained pockets. At such a time, the state's unprecedented rate of unemployment will certainly not help.
- Rise in disguised unemployment: The returned workforce from cities will engage in agricultural work in villages. The agriculture sector is already stressed and the dependence of a large population will enhance the problem.
  - The migration is highest for landless households or has less than an acre of land.

Challenge for administration

- Health emergency: This has opened up the serious threat of the rural spread of Covid-19, which can result in medical emergencies.
  - Villages have only rudimentary health infrastructure and lack proper hospitals with ventilators which are needed to fight the virus. There is less than one doctor per 1,000 population.
- Social stigma: Due to lack of understanding of the disease the migrants are facing stigma and that is causing social tension in rural areas.
- Availability of essential goods: The sudden spike of the dependent population in rural areas will put an extra burden on the state treasury.
- Hindrance in economic recovery: With basic sustenance support from the government for three months, many interstate migrants may not return to work soon. Labour shortage, it is being feared, can hinder economic recovery.

Conclusion

- The families of migrant workers from under-developed states like Bihar, Uttar Pradesh, Jharkhand etc depend on the remittances they receive every month. The sudden imposition of the national lockdown has rendered workers jobless and thus drying up the source of remittances.
- It is important for the government to engage those migrant workers in employment generated in the local area.
- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme can act as a cushion for the state government to tackle the huge flow of migrant labourers in rural areas. The government should increase the scope of work done under the MGNREGA scheme.