COVID- 19 NEWS

Vande Bharat Mission

In one of the largest evacuation exercises named Vande Bharat Mission, the government will operate 64 flights between 7th and 13th of May to bring home nearly 14,800 Indian nationals stranded abroad due to the Corona virus lockdown.

About:

- The 64 flights which will be operated include ten flights from UAE, seven each from Bangladesh, Malaysia, United Kingdom and United States, five each from Saudi Arabia, Singapore, Philippines and Kuwait along with two each from Qatar, Bahrain and Oman.
- Out of the total, fifteen flights will bring back people to Kerala followed by eleven flights to Tamil Nadu and Delhi. Seven flights will be flying back people to Maharashtra and Telangana whereas five flights are slated for Gujarat.

NSafe

An IIT Delhi startup 'Nanosafe Solutions' has launched an antimicrobial and washable face mask 'NSafe', which is reusable up to 50 launderings, thus greatly cutting down the cost of use.

About:

- NSafe mask has 99.2% bacterial filtration efficiency (at 3 microns) and complies with ASTM standards of breathability and splash resistance.
- It is believed to be the first fabric based antimicrobial face mask launched in India.
- NSafe mask enhances protection to the wearer through three different mechanisms: mechanical filtration, antimicrobial decontamination and repulsion of aerosol droplets.

Silent Hypoxia

Medical practitioners have reported a condition called 'silent' or 'happy' hypoxia, in which patients have extremely low blood oxygen levels, yet do not show signs of breathlessness. They are now advocating for its early detection as a means to avoid a fatal illness called Covid pneumonia.

About:

- Hypoxia is a condition wherein there is not enough oxygen available to the blood and body tissues. Hypoxia can either be generalised, affecting the whole body, or local, affecting a region of the body.
- According to researchers, Covid pneumonia — a serious medical condition found in severe Covid-19 patients — is preceded by 'silent hypoxia', a form of oxygen deprivation that is harder to detect than regular hypoxia.
- In 'silent' or 'happy' hypoxia, patients appear to be less in distress. Many Covid-19 patients, despite having oxygen levels below 80 per cent, look fairly at ease and alert. This phenomenon has puzzled several medical practitioners.

Garud Portal

Ministry of Civil Aviation (MoCA) and Directorate General of Civil Aviation (DGCA) have launched the GARUD portal (https://garud.civilaviation.gov.in) for providing fast track conditional exemptions to government agencies for COVID-19 related drone operations.

About:

- GARUD is an acronym for 'Government Authorisation for Relief Using Drones'.
- The step has been taken to aid government entities in addressing the challenges posed by COVID-19 and will remain in force until further orders.
- The rules and regulations related to operation of Drones/Remotely Piloted Aircraft ("RPA") are covered under Rule 15A of Aircraft Rules, 1937 and Civil Aviation Requirements ("CAR") Section 3 Series X Part I dated 27.8.2018 issued by Directorate General of Civil Aviation (DGCA).

CONSTITUTION AND POLITY

Darbar Move

The Jammu and Kashmir High Court asked the Centre and the Union Territory (UT) administration of J&K to take a final call on the continuation of the 'Darbar Move.'

About:

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- Darbar move is the name for the bi-annual shift of the secretariat and all other government offices in J&K from Srinagar (state's summer capital) to Jammu (state's winter capital).
- The secretariat is located in Srinagar from May to October and in Jammu from November to April. Along with the secretariat, the J&K High Court also moves.
- The practice was startedby Dogra King Maharaja Ranbir Singh in 1872 to escape extreme weather conditions in these places. It was a compulsion in the past because of poor means of transportation and communication.

Debate:

- Arguments against Darbar move: The Practice is inconvenient and a waste of time and money. Every year, over 7,000 employees along with thousands of files of the civil secretariat are ferried between Jammu and Srinagar in buses and trucks on the 300-km-long route .The move costs the State over Rs. 40 crore.
- Arguments in favour of it:
- Abolishing the "Darbar Move" may increase the feeling of alienation between Jammu (which is predominantly Hindu) and Kashmir (which is predominantly Muslim).
- J&K is not the only exception to have two capital cities. Recently, Andhra Pradesh has proposed three capital cities.

INTERNATIONAL AFFAIRS- BILATERAL, GROUPINGS, ORGANISATIONS

Russia-North Korea Relations

Russian President Vladimir Putin has awarded Kim Jong-un a commemorative war medal marking the 75th anniversary of the victory over Nazi Germany. The medal was awarded to Mr. Kim for his role in preserving the memory of Soviet soldiers who died on North Korean territory.

Background:

- Soviet troops helped drive Japanese forces out of the Korean peninsula in the final stages of WWII.
- The Soviet Union also played the main role in installing Kim Jong Un's grandfather, Kim Il Sung, as the first leader of the nascent Communist state in 1948.
- Alongside China, it supported North Korea during the 1950s Korean War, which never officially ended despite the 1953 armistice.

Related Info:

- The ceremony came days after Kim ended mounting speculation over his health when North Korean media published photos of him smiling at a ribbon-cutting ceremony at a fertiliser plant.
- His re-emergence came as a blow to the credibility of some high-profile defectors from the North who had speculated he was suffering from a grave illness or could even be dead.

Toman

The Iranian Parliament authorised the replacement of the national currency, the rial with another basic unit of currency called the toman.

About:

- The plan is set to effectively cut four zeros from its currency, making each toman worth 10,000 rials under the new system.
- The Guardian Council, a body of conservative clerics that supervises Parliament, is expected to ratify the law, and then the Central Bank will have two years to implement the change — removing rials from circulation and issuing tomans instead.
- Iran's move is to offset the fallout from inflation fueled by U.S. sanctions.

Long March 5B

China has successfully launched Long March 5B rocket, a new rocket and prototype spacecraft, in a major test of its ambitions to operate a permanent space station and send astronauts to the Moon.

About:

- A Long March 5B rocket took off from the Wenchang launch site on the southern island of Hainan and eight minutes later an unmanned prototype spacecraft successfully separated and entered its planned orbit.
- China hopes that the craft will one day transport astronauts to a space station that it plans to complete by 2022 – and eventually to the Moon. It will have capacity for a crew of six.

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- China plans to send an astronaut to the Moon in about a decade and then build a base there.
- The United States is so far the only country to have sent humans to the Moon. But in its effort to catch up, China has sent astronauts into space, satellites into orbit and a rover to the far side of the Moon in 2019.

Gilgit-Baltistan

The External Affairs Ministry of India issued a "strong protest" over an order by the Pakistan Supreme Court allowing the Pakistan's Government to hold elections in the region of Gilgit-Baltistan of Pakistan-occupied Kashmir (PoK).

About:

- Gilgit-Baltistan (GB) was formerly known as the Northern Areas.
- It is an integral part of the Indian Union Territory of Ladakh but is currently under Pakistani occupation.
- Gilgit Baltistan has been under the control of Pakistan since April 1949, when the leadership of the so-called Azad Jammu and Kashmir (AJK) was forced to sign away this territory to Pakistan.
- However, the region does not have any place in the constitutional framework of Pakistan and has been kept under the tight control of the central government. The region functioned as a "provincial autonomous region" since 2009.
- Gilgit-Baltistan shares a border with Azad Kashmir, together with which it is referred to by the United Nations as "Pakistan administered Kashmir".
- Pakistan in recent months had taken a series of steps to ensure full constitutional and legal guarantees to the region which was strategically important for the country especially in view of the passage of the China-Pakistan Economic Corridor (CPEC) through the region.

SOCIO-ECONOMIC DEVELOPMENT

Impact Of Energy Efficiency Measures For The Year 2018-19

The Union Minister of Power released a Report on "Impact of energy efficiency measures for the year 2018-19."

About:

- With energy efficiency initiatives, India has already reduced the energy intensity of economy by 20% compared to 2005 levels. In COP-21, India pledged to bring down energy intensity of economy by 33 to 35% compared to 2005 levels by 2030.
- Implementation of various energy efficiency schemes have led to total electricity savings to the tune of 113.16 Billion Units in 2018-19, which is 9.39% of the net electricity consumption.
- The total energy savings achieved in 2018-19 is 23.73 Mtoe (million Tonne of Oil Equivalent), which is 2.69% of the total primary energy supply (estimated to be 879.23 Mtoe in India) during 2018-19. This includes both Supply Side and Demand Side sectors of the economy.
- These efforts have also contributed in reducing 151.74 Million Tonnes of CO_2 emissions, whereas last year this number was 108 MTCO2.

National Land Management Corporation

The task force on National Infrastructure Pipeline has recommended setting up a National Land Management Corporation, which would help in monetising state-owned surplus land assets in a systematic way.

Recommendations:

- Such a corporation should be set up under Companies Act to function as the facilitator for land monetisation and an asset manager for lands owned by government of India and Central Public Sector Enterprises.
- A chief executive officer (CEO) and a technical team should be hired at market-linked compensation to carry out land monetisation.
- Apart from a CEO and technical team, the Corporation should have representation from the Finance Ministry, Department of Public Enterprises, Ministry of Housing and Urban Affairs as well as independent directors from finance and real estate industry.
- The Corporation can raise capital from the equity market, based on the value of its leased assets.
- The panel recommended the Corporation consider development or co-development of land belonging to defence or railways as well. It can also take up co-development of private land parcels adjoining government lands to maximise revenue.

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INTERNAL SECURITY, DISASTER MANAGEMENT ISSUES

The Resistance Front (TRF)

A little-known outfit, The Resistance Front (TRF), had claimed responsibility for the April 5 attack on the security forces along the Line of Control in the Kupwara sector, where five Army personnel were killed. TRF is becoming the new face of Kashmir terror.

View of Indian Security forces:

- The Resistance Front (TRF) is a front organization of the Pakistan-backed Lashkar-e-Taiba (LeT).
- It was promoted by Pakistan and created in August 2019 following the withdrawal of Article 370.
- All attacks carried out by the Pakistan-backed Lashkar-e-Taiba (LeT) are being pinned on the newly formed "seasonal" group in the Kashmir Valley in order to escape scrutiny by the Financial Action Task Force (FATF) and avoid further sanctions.
- The global money laundering and terrorist financing watchdog is to review Pakistan's performance in acting against terror funding at its next meeting in Beijing in June.
- Pakistan wants to project Kashmiri terrorism as a resistance movement by Kashmiris. So far Hizbul and LeT have come under TRF's umbrella.

Styrene

A gas leak has claimed at least Eleven lives and affected thousands of residents in Visakhapatnam in Andhra Pradesh. The source of the leak was a styrene plant owned by South Korean electronics giant LG, located at RRV Puram near Gopalapatnam, about 15 kms from the coast city.

About:

- Styrene is a flammable liquid that is used in the manufacturing of polystyrene plastics, fiberglass, rubber, and latex. Styrene is also found in vehicle exhaust, cigarette smoke, and in natural foods like fruits and vegetables.
- Short-term exposure to styrene can result in respiratory problems, irritation in the eyes, irritation in the mucous membrane, and gastrointestinal issues.
- Long-term exposure could drastically affect the central nervous system and lead to other related problems like peripheral neuropathy. It could also lead to cancer and depression in some cases.
- Symptoms include headache, hearing loss, fatigue, weakness, difficulty in concentrating etc.

SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC

African Swine Fever (ASF)

Since February 2020, over 2,900 pigs have died in the Assam due to African Swine Fever (ASF). This is the first time that an ASF outbreak has been reported in India.

About:

- African swine fever is a highly infectious viral disease that affects pigs, warthogs, bush pigs, European wild boar and American wild pigs.
- Cause: It is caused by African swine fever virus, member of the Asfarviridae family.
- Transmission: Transmission can occur either directly contact of sick and healthy animals, and indirectly through contaminated feed, or on contaminated clothing, vehicles or as other fomites.
- Geographical Distribution: ASF is present in wild and/or domestic pigs in regions of Asia, Europe and Africa. ASF Virus is endemic to sub-Saharan Africa. It has been seen in South America and the Caribbean but has been eradicated.
- Symptoms: The infected animals get high haemorrhagic fever, lose of appetite, diarrhoea, reddening of the skin at extremities, chest and abdomen and die in 2-10 days.
- Prevention: There is no effective vaccine to protect pigs from the virus. No vaccine exists and culling (Slaughtering) is often the only effective way.
- Impact on Humans: Unlike the H1N1 virus that causes swine flu, the ASF virus doesn't infect humans.

African Swine Fever (ASF) vs Swine Flu

- Swine influenza or swine flu is a respiratory disease of pigs, which is caused by type A influenza virus that regularly causes outbreaks of influenza in pig populations.
- While the swine flu causing virus leads to a high number of infections in pig herds, the disease is not as fatal and causes few deaths.
- Specific swine influenza vaccines are available for pigs.

- Further, while swine flu viruses don't typically infect humans, cases have been reported in the past, most commonly when humans have contact with infected pigs.

Young Career Award In Nano Science & Technology 2020

IIT Bombay Professor Saurabh Lodha has received the Young Career Award in Nano Science & Technology for the year 2020 for Advanced Transistor Technologies.

About:

- The award has been instituted by the Department of Science and Technology (DST), Govt. of India.
- This award recognises his pioneering contributions in the development of logic transistor technologies beyond silicon and nanoelectronic devices based on two-dimensional Van der Waals materials.
- The ultra-thin (less than a nm thick) nature of these Van der Waals materials, analogous to graphene, bestows them with extraordinary optical and electronic properties along with high mechanical flexibility.

Internet Penetration

The latest report by the Internet & Mobile Association of India (IAMAI) and Nielsen showed rural India had 227 million active internet users, 10% more than urban India's about 205 million, as of November 2019. This is for the first time, India has more internet users in rural areas than in urban cities.

About:

- In addition, there are around 71 million kids, aged 5-11 years, who go online using devices of family members. With this, India surpassed another milestone of having 504 million active internet users who are 5 years old or above — 53 million more than 451 million in March 2019.
- With 504 million active internet users who are 5 years old or above , India has become the second-largest internet user market behind China, which has about 850 million users. The United States has about 280-300 million users.
- India remains behind both countries in internet penetration, which stands at 40% compared to over 88% for the US and 61% for China.
  (Active internet users are defined as those who use the internet at least once a month.)

Nicotine Hypothesis

Researchers in France have put forward a hypothesis that the presence of nicotine actually equips the body to fight COVID-19. And they are conducting trials to test the hypothesis.

About:

- At the centre of the nicotine hypothesis is a receptor that responds to nicotine as well as a chemical called acetylcholine. Hence its name: "nicotinic acetylcholine receptor", abbreviated as nAChR.
- nAChR is found in parts of the nervous system, muscle and certain tissues of organisms including humans. Nicotine is known to bind with the nAChR receptor.
- According to the hypothesis, If nicotine is present on the receptor, and the novel coronavirus arrives, then the nicotine would block the interaction.

Receptors

- Receptors are structures composed of protein, and they receive signals that may be integrated into the body. These signals can come from various substances, such as a hormone, a drug, or an antigen.
- For example, the surface of the human cell has receptors called ACE2, which open the door for the novel coronavirus SARS-CoV2 to enter the body.

DEFENCE AND SECURITY

Operation Samudra Setu

Indian Navy has launched Operation Samudra Setu - meaning Sea Bridge, as a part of national effort to repatriate Indian citizens from overseas amid coronavirus pandemic.

About:

- Indian Naval Ships Jalashwa and Magar are presently enroute to Malè in Maldives to commence evacuation operations as part of Phase-1. A total of one thousand persons are planned to be evacuated during the first trip.

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- The evacuated personnel will be disembarked at Kochi in Kerala and entrusted to the care of State authorities.
- This operation is being progressed in close coordination with Ministries of Defence, External Affairs, Home Affairs, Health and various other agencies of the Government of India and State governments.

DAILY ANSWER WRITING PRACTICE

Qns. Discuss the term Antibiotic resistance and steps to control it.

Antibiotics are medicines used to prevent and treat bacterial infections. Antibiotic resistance occurs when bacteria change in response to the use of these medicines. The discovery of antibiotics less than a century ago was a turning point in public health that has saved countless lives. But, over the years, the misuse and overuse of antibiotics drugs have contributed to a phenomenon known as antibiotic resistance.

Reasons for the development of Antibiotic resistance

- Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, as well as poor infection prevention and control.
- Antibiotics can be bought for human or animal use without a prescription.
- Similarly, in countries without standard treatment guidelines, antibiotics are often over-prescribed by health workers and veterinarians and over-used by the public.
- More than 50% of antibiotics in many countries is used inappropriately such as for treatment of viruses when they only treat bacterial infections or use of the wrong (broader spectrum) antibiotic.

Impact of Antibiotic Resistance

- Antibiotic resistance leads to higher medical costs, prolonged hospital stays, and increased mortality.
- A growing list of infections – such as pneumonia, tuberculosis, blood poisoning, gonorrhoea, and foodborne diseases – are becoming harder, and sometimes impossible, to treat as antibiotics become less effective.
- Antibiotic resistance is putting the achievements of modern medicine at risk. Organ transplantations, chemotherapy and surgeries such as caesarean sections become much more dangerous without effective antibiotics for the prevention and treatment of infections.
- As per a UN report, at least 7,00,000 people die each year due to drug-resistant diseases currently.
- According to WHO, without urgent action, the world is heading for a post-antibiotic era, in which common infections and minor injuries can once again kill. Also, it estimated that by 2050, this number could go up to 10 million.

Steps To Be Taken

- Steps can be taken at all levels of society to reduce the impact and limit the spread of antibiotic resistance.
- Individuals should only use antibiotics when prescribed by a certified health professional.
- Policymakers can ensure a robust national action plan to tackle antibiotic resistance is in place. This plan should strive:
  o Improve surveillance of antibiotic-resistant infections
  o Strengthen policies, programmes, and implementation of infection prevention and control measures
  o Regulate and promote the appropriate use and disposal of quality medicines.
  o Make information available on the impact of antibiotic resistance.
  o Invest in research and development of new antibiotics, vaccines, diagnostics and other tools.

Conclusion

The world urgently needs to change the way it prescribes and uses antibiotics. Even if new medicines are developed, without behaviour change, antibiotic resistance will remain a major threat. Behaviour changes must also include actions to reduce the spread of infections through vaccination, hand washing, practising safer sex, and good food hygiene.