

COVID- 19 NEWS**Ultraviolet Germicidal Radiation (UVGI)**

Scientists are studying the use of ultraviolet germicidal radiation (UVGI) to detect the coronavirus in schools, restaurants and other public places. Through this method, ultraviolet (UV) lights would be able to disinfect contaminated public spaces to stop the transmission of the virus.

Ultraviolet radiation

- The full spectrum of UV radiation from the sun can be subdivided into UV-A, UV-B and UV-C rays.
- UV-C rays are the most harmful and are completely absorbed by the Earth's atmosphere.
- While both UV-A and UV-B rays are harmful, exposure to UV-B rays can cause DNA and cellular damage in living organisms. Increased exposure to it can cause cells to become carcinogenic, thereby increasing the risk of getting cancer.

Ultraviolet Germicidal Radiation (UVGI):

- UVGI uses these “destructive properties” of UV light for disinfecting the air and preventing certain infectious diseases from spreading.
- UVGI replicates UV wavelengths that disinfects contaminated spaces, air and water.

Is this method feasible:

- UVGI is a promising method for disinfection but the efficacy of it depends on its dose.
- UVGI is most effective in preventing infections that are chiefly spread through smaller droplets and not by direct contact or larger respiratory droplets.
- Using UVGI on a mass-scale, in public spaces such as schools, universities, restaurants and cinema halls may not be the most cost-effective way to approach disease prevention.

NATIONAL SOCIAL ISSUES- WOMEN, POPULATION, URBANISATION, EMPOWERMENT ETC**Migrants Welfare**

Activists are demanding strict implementation of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 to ensure welfare of inter-State migrants who are suffering due to the nationwide lockdown.

About:

- The Inter-State Migrant Workmen Act, 1979 seeks to regulate the employment of inter-State migrants and their conditions of service.
- It is applicable to every establishment and contractors that employs five or more migrant workmen from other States; or if it had employed five or more such workmen on any day in the preceding 12 months.
- The principal employer is prohibited from employing inter-State workmen without a certificate of registration from the relevant authority.
- Every contractor who recruits workmen from one State for deployment in another State should obtain a licence to do so. As part of the licensing process, contractors are bound by certain conditions like committing them to providing terms and conditions.
- In no case, shall the wages be lower than what is prescribed under the Minimum Wages Act.

Occupational Safety, Health and Working Conditions Code, 2019:

- The proposed code has been introduced in the Parliament to merge 13 labour laws into a single piece of legislation. The Inter-State Migrant Workmen Act, 1979, is one of them.
- Activists fear that specific safeguards given to migrant workers may be lost as a result of this consolidation.

Pranavayu Programme

The Bengaluru city corporation has launched Pranavayu programme to create awareness on the need to self examine the respiratory health for Bangaloreans.

About:

- Several deaths due to COVID-19 are reported due to Severe Acute Respiratory illness (SARI).
- Pranavayu awareness programme is an attempt to help people with low oxygen level in their blood to get themselves checked early before their ailments become fatal.

Road Construction Target

Union Minister for Road Transport & Highways held a meeting on impact of COVID-19 on auto sector.

Key highlights of the meeting:

- Union Minister for Road Transport & Highways has set a target of constructing roads worth Rs 15 lakh crore in the next two years.
- The Minister informed that he has directed the ministry officials to finalise the auto scrapping policy quickly which will go a long way in cost reduction.
- He also suggested exploring cheaper credits including foreign capital for enhancing liquidity in the automobile manufacturing sector.

GEOGRAPHY- PHYSICAL AND ECONOMIC

Pakistan-Occupied Kashmir (PoK)

The India Meteorological Department has started mentioning areas in Pakistan-occupied Kashmir (PoK) — Gilgit-Baltistan and Muzaffarabad — in its regional forecast bulletin as part of its Jammu & Kashmir Met subdivision.

About:

- Though the IMD had been mentioning PoK areas in its national forecast for the last six months after J&K's bifurcation last year, its regional forecasts started specifying the areas explicitly in its bulletins from May 5.
- The move assumes significance, considering India's official position that PoK belongs to India.
- The inclusion of Muzaffarabad and Gilgit-Baltistan comes amid Pakistan's Supreme Court allowing elections in Gilgit-Baltistan recently, to which India had strongly reacted.

Pakistan-occupied Kashmir (POK):

- Pakistan-occupied Kashmir (POK) historically belonged to the erstwhile princely state of Jammu and Kashmir. This territory has been under Pakistan's unlawful control since October 1947.
- POK comprises the so-called Azad Kashmir and Gilgit-Baltistan and has remained an amorphous.
- The Trans Karakoram Tract, comprising Shaksgam from Baltistan and Raskam from Gilgit, which Pakistan ceded to China in 1963, is also a part of POK. China promised to assist Pakistan in building the Karakoram Highway as a payoff.
- Muzaffarabad is the capital of the so called Azad Kashmir (AJK).

GOVERNANCE- WELFARE SCHEMES, E-GOVERNANCE, SERVICES ETC.

Sample Registration System (SRS) Bulletin

The Registrar General of India released its Sample Registration System (SRS) bulletin based on data collected for 2018. Key findings are:

Birth rate:

- The national birth rate in 2018 stood at 20 per one thousand of the population.
- Bihar has the highest birth rate at 26.2 and Andaman and Nicobar Islands is at the bottom with a birth rate of 11.2.
- At an all-India level, the birth rate is higher in rural areas (21.6) compared to urban areas (16.7).

Death Rate:

- The national death rate in 2018 stood at 6.2 per one thousand of the population.
- Chhattisgarh has the highest death rate at 8 and Delhi has a rate of 3.3, indicating better healthcare facilities.
- At an all-India level, the death rate is higher in rural areas (6.7) compared to urban areas (5.1).

Infant mortality rate (IMR):

- The national IMR in 2018 stood at 32 per one thousand of the population. The IMR at an all-India level has declined from 50 to 32 in the last decade.
- Madhya Pradesh has an IMR of 48 and Nagaland 4.

Sample Registration System (SRS):

- The Sample Registration System (SRS) is a demographic survey for providing reliable annual estimates of infant mortality rate, birth rate, death rate and other fertility and mortality indicators at the national and sub-national levels.
- Initiated on a pilot basis by the Registrar General of India in a few states in 1964-65, it became fully operational during 1969-70.

Principle of 'strict liability' vs 'absolute liability'

The National Green Tribunal's order in the Visakhapatnam gas tragedy found LG Polymers prima facie liable under the 19th century English law, Principle of "strict liability", which was made redundant in India by the Supreme Court in 1986.

Strict liability principle:

- Under the "strict liability principle", a party is not liable and need not pay compensation if a hazardous substance escapes his premises by accident or by an "act of God" among other circumstances.
- The strict liability, evolved in an 1868 English case called Rylands versus Fletcher, provided companies with several exemptions from assuming liability.
- In the Visakhapatnam gas tragedy, even though the NGT directed the company to deposit an initial amount of ₹50 crore and formed a fact-finding committee, its use of the term "strict liability" has been questioned. Lawyers say the term "absolute liability" should have been used instead.

Absolute Liability Principle:

- The Supreme Court, while deciding the Oleum gas leak case of Delhi in 1986, found strict liability woefully inadequate to protect citizens' rights in an industrialised economy like India and replaced it with the 'absolute liability principle'.
- Under the absolute liability principle, the apex court held that a company in a hazardous industry cannot claim any exemption.
- It has to mandatorily pay compensation, whether or not the disaster was caused by its negligence. The court said a hazardous enterprise has an "absolute non-delegable duty to the community".
- The principle of absolute liability is part of Article 21 (right to life).

ENVIRONMENT- CONSERVATION, BIO-DIVERSITY AND ISSUES

Elongated Tortoise

According to a recent study by ecologists in the Wildlife Institute of India, Dehradun, over 90% of the potential distribution of the Sal forest tortoise falls outside current protected area's network.

About:

- Scientific name: Indotestudo elongate.
- Common name: Elongated tortoise, Yellow Tortoise and Sal forest tortoise.
- Distribution: It is a species of tortoise found in Southeast Asia and parts of the Indian Subcontinent, particularly Northeast India.
- Physical description: These up to 1 foot-long tortoises have elongated somewhat narrow carapaces and yellow heads. Shells are typically a pale tannish-yellow to caramel color, with blotches of black.
- IUCN Red List Status: Critically Endangered.
- Population: According to the IUCN the population of the species may have fallen by about 80% in the last three generations (90 years).
- Threats: It is heavily hunted for food and collected both for local use, such as decorative masks, and international wildlife trade. In china, a mixture, made by grinding up the tortoise's shell, also serves as an aphrodisiac.

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

Smallpox

World Health Organization (WHO) and the UN's postal agency released a commemorative postage stamp on the 40th anniversary of the eradication of smallpox.

About:

- Cause: Smallpox was an infectious disease caused by one of two virus variants, Variola major and Variola minor.
- Transmission: It was contagious i.e. spread from one person to another.
- Symptoms: The initial symptoms of the disease included fever and vomiting. This was followed by formation of sores in the mouth and a skin rash. Over a number of days the skin rash turned into characteristic fluid-filled bumps with a dent in the center.
- Mortality: The risk of death following contracting the disease was about 30%, with higher rates among babies.

- Eradication: The last naturally occurring case was diagnosed in October 1977, and the World Health Organization (WHO) certified the global eradication of the disease in 1980.

Related Info:

- Smallpox is one of two infectious diseases to have been eradicated, the other being rinderpest in 2011.
- Edward Jenner (1749 – 1823) was an English physician who was a contributor to the development of the smallpox vaccine.

DAILY ANSWER WRITING PRACTICE

Qns: If Asia-Pacific Economic Cooperation (APEC) wants to remain as relevant and look toward a new phase of Asia-Pacific economic integration, it must include India as its member. Comment.

Answer

APEC was established in 1989 as an intergovernmental platform for 21 Pacific Rim member economies to promote free-trade in the region.

- The grouping is facing the heat of unilateralism and protectionism. Competition and divergence in the form of US-China tensions was on full display at the 2018 APEC summit
- As a result, a debate pertaining to the question of the forum's enlargement, with pointed reference to India, has started.

APEC Needs India

- Economic strength of India – As the region's third largest and one of the fastest growing major economy, India presents the most promising market in the wider Asia-Pacific. India's burgeoning middle class is estimated to become 450 million in 2030. Also India aspires to become a \$5 trillion economy.
- Boost to the economic activities – APEC economies are experiencing sluggish growth. Hence, adding India to APEC would augment regional trade and investment.
- Labour Supply - India's labor force, which will be the largest in the world by 2030, will help offset the impact of aging populations and shrinking work forces in APEC economies.
- Legitimate stakeholder in regional and global governance – India is second largest democracy in the world and an important player in Indo-Pacific arena.
- Complementarity - Outside the west Europe, most of the capital surplus nations are in Asia Pacific. On the other hand, India badly needs investment.
- Emergence of Indo-Pacific Concept – India has emerged as a key player which is central to the Indo-Pacific concept.

Conclusion

- Strength of the APEC grouping can be gauged from the fact that it represents more than a third of the world population, 47% of global trade and 60% of world GDP.
- However, declining multilateralism, increasing protectionism and incidents like trade war are creating a pressure on this institution to reform.
- Hence, it can be said that without India APEC would not only remain incomplete but also unable to reinvent itself. India, on the other hand, will have to ensure economic reforms and openness to qualify for APEC membership.