

## **UPSC Daily Current Affairs | Prelim Bits 23-07-2020**

### **Kakrapar Atomic Power Plant**

- Kakrapar Atomic Power Plant is the country's first 700 MWe (megawatt electric) unit, located in Gujarat.
- It is the biggest indigenously developed variant of the Pressurized Heavy Water Reactor (PHWR).
- The operationalization of India's first 700MWe reactor marks a significant scale-up in technology.
- It has recently achieved its criticality, which is a landmark event in India's domestic civilian nuclear programme.
- It is significant in terms of optimization of its PHWR design.
- It addresses the issue of excess thermal margins and an improvement in the economies of scale, without significant changes to the design of the 540 MWe reactor.
- 'Thermal margin' refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature.
- The 700MWe capacity would constitute the biggest component of the expansion plan of India to ramp up its existing nuclear power capacity of 6,780 MWe to 22,480 MWe by 2031.

### **Criticality**

- The normal operating condition of a reactor, in which nuclear fuel sustains a fission chain reaction.
- A reactor achieves criticality when each fission event releases a sufficient number of neutrons to sustain an ongoing series of reactions.

### **Report on Immunization among Children**

- National Statistical Office (NSO) released a report on immunization among children.
- The survey was conducted during July 2017-June 2018.

#### *Highlights of the report -*

- i. Around 60% of children under five years of age were fully immunized.
- ii. This includes about 59% of boys and 60% of girls across the country who had been fully immunized with all eight prescribed vaccinations (BCG, OPV- 1,

- 2,3, DPT- 1,2,3 and measles).
- iii. In rural India (58%) and Urban (62%) were fully immunized.
  - iv. Majority of the children received vaccination from government hospitals or clinics.

## **YuWaah**

- UNICEF had launched Generation Unlimited India (YuWaah) in 2019.
- It is a multi-stakeholder alliance which aims to facilitate youth to gain relevant skills for productive lives and the future of work.
- The target age group includes adolescent girls and boys.
- Its key mission is to promote among youth foundational skills, life skills and flexible learning and identifying and scaling impactful delivery models.
- Union Ministry of Youth Affairs has recently signed a Statement of Intent with YuWaah.
- The partnership aims to promote volunteerism among the youth of India as well as to help them transition from education and learning to productive work, skilling and being active citizens.

## **Bubonic plague**

- Bubonic plague is a rare but serious zoonotic disease.
- It is caused by bacterial infection and transmitted by fleas from rodents.
- It mainly results from the bite of an infected flea, and also from exposure to the body fluids from a dead plague-infected animal.
- There are no reports of human to human transmission of bubonic plague.
- It is one of the three plagues caused by bacterium *Yersinia pestis*.
- The other two being Septicaemic plague and Pneumonic plague.
- According to the WHO it can kill an adult in less than 24 hours, if not treated in time.
- Vaccine for the bubonic plague is available for individuals with high exposure to the plague.
- Recently a city in northern China sounded an alert after a suspected case of bubonic plague or 'Black Death' was reported.

## **Venus Coronae**

- Researchers have recently studied the formation of Venus' ring-shaped volcanic structures called "Coronae".
- They are formed by plumes of molten rock rising from the mantle up through the crust.
- This process is similar to how Earth's volcanos function.
- Interestingly, most of Earth's volcanism occurs along the boundaries of

tectonic plates, but modern Venus doesn't seem to possess tectonic plates.

- They identified three dozen features on Venus, which they state could have been created by volcanism.
- If this is true then it will potentially reshape our understanding about the planet and its evolution.
- Venus was earlier determined to be an inactive planet. However, now it is being said that the interior is still churning and can feed many active volcanoes.

### **Vriksharopan Abhiyan**

- "Vriksharopan Abhiyan" is a campaign organised by the Ministry of Coal.
- It is a part of going green Initiative of Ministry of Coal.
- Under this initiative, large scale plantation will be carried out in colonies, offices, and mines and in other suitable areas of coal and Ignite PSUs.
- Seedlings will also be distributed under the campaign in the nearby areas for promoting plantation by society.
- It involves all coal and lignite PSUs.
- Under this initiative six eco-parks were inaugurated by Home Ministry, it will provide avenues for the adventure, water sport, recreation, bird watching, etc.
- Going Green initiative involves maximization of green cover through ecological reclamation of the mined-out areas and overburden dumps, avenue plantation at suitable places, and plantation in and around the mines.

**Source:** PIB, Times of India, Indian Express