The novel coronavirus has a **lipid envelope**. Soap being a detergent destroys this envelope. The same is **true for alcohol also**.

**Structure of Lipid Envelope:**
- SARS-CoV-2 particles, like other coronaviruses, are spherical and **have proteins called spikes** protruding from their surface.
- These spikes **latch onto human cells**, then undergo a structural change that allows the viral membrane to **fuse with the cell membrane**. The viral genes can then enter the host cell to be copied, producing more viruses.
- Recent work shows that, like the virus that caused the 2002 SARS outbreak, SARS-CoV-2 spikes bind to receptors on the **human cell surface called angiotensin-converting enzyme 2 (ACE2)**.
- All of this is **held together by a fatty layer, called an envelope**.

**Functioning of Alcohol in Sanitizers:**
- The Envelope layer is **disrupted when it comes into contact with soap or a hand sanitiser with more than 60% alcohol**.
- Disruption of the envelope leads to the **killing of the virus**.
- Handwashing for 20 seconds at least kills the virus.

**Indian Government’s Move:** The Government has notified **hand sanitizers as an essential commodity under the Essential Commodities Act, 1955**.