Context:

Karnataka’s first plasma donor, whose plasma will be administered to a COVID-19 patient, hopes to inspire others to come forward and help in the fight against the pandemic.

He contracted the virus in the end of March after travelling to Dubai.

What is plasma and what are platelets?

Plasma is the **liquid portion** of whole blood. It is composed largely of **water and proteins**, and it provides a **medium for red blood cells, white blood cells and platelets** to circulate through the body. **Platelets, also called thrombocytes**, are blood cells that **cause blood clots** and other necessary growth healing functions.

Platelet activation plays a key role in the **body's natural healing process**.

Facts about plasma

- Plasma is the largest part of your blood. It, makes up more than half (about 55%) of its overall content.
- When separated from the rest of the blood, plasma is a light yellow liquid. Plasma carries water, salts and enzymes.
- The main role of plasma is to take nutrients, hormones, and proteins to the parts of the body that need it.
- Cells also put their waste products into the plasma. The plasma then helps remove this waste from the body. Blood plasma also carries all parts of the blood through your circulatory system.

How does plasma keep you healthy?

- Plasma is a critical part of the treatment for many serious health problems. This is why there are blood drives asking people to donate blood plasma.
- Along with water, salt, and enzymes, plasma also contains important components. These include antibodies, clotting factors, and the proteins albumin and fibrinogen. When you donate blood, healthcare providers can separate these vital parts from your plasma. These parts can then be concentrated into various products. These products are then used as treatments that can help save the lives of people suffering from burns, shock, trauma, and other medical emergencies.
- The proteins and antibodies in plasma are also used in therapies for rare chronic conditions. These include autoimmune disorders and hemophilia. People with these conditions can live long and productive lives because of the treatments. In fact, some health organizations call plasma "the gift of life."

Donating plasma

- If you want to donate plasma to help others in need, you will go through a screening process. This is to make sure your blood is healthy and safe. If you qualify as a plasma donor, you'll spend about an hour and a half at a clinic on every follow-up visit.
- During the actual blood donation process, your blood is drawn through a needle placed in a vein in one arm. A special machine separates the plasma and often the platelets from
your blood sample. This process is called plasmapheresis. The remaining red blood cells and other blood components are then returned to your body, along with a little saline (salt) solution.

**What is convalescent plasma? Is it a COVID-19 treatment?**

- Researchers are testing the use of donated blood as a treatment for people with severe coronavirus disease 2019 (COVID-19).
- People who’ve recovered from COVID-19 have antibodies to the disease in their blood. Doctors call this convalescent plasma. Researchers hope that convalescent plasma can be given to people with severe COVID-19 to boost their ability to fight the virus.
- The U.S. Food and Drug Administration has outlined the requirements that individuals must meet to donate blood for this research. Before donated blood can be used, it must be tested for safety. It then goes through a process to separate out blood cells so that all that’s left is plasma with antibodies.
- The immediate goal of this research is to determine if convalescent plasma can improve the chance of recovery for people with the most severe disease. A second goal is to test whether convalescent plasma can help keep people who are moderately sick from getting sicker.
- Such a treatment would be a boon for people at high risk — such as with underlying medical conditions, as well as family members and health care workers who have been exposed.
- In addition, learning more about the use of convalescent plasma now will help health care workers be better prepared if a second wave of disease occurs, as has happened with past viral outbreaks.