Define Green Hydrogen. Discuss the significance and challenges related to green Hydrogen(8).

Green hydrogen is a type of hydrogen that is produced through the electrolysis of water using renewable energy sources such as solar or wind power. Water is split into hydrogen and oxygen during the electrolysis process, and the hydrogen that is created can be used as a clean, sustainable fuel

Significance:

Hydrogen can be used to power vehicles, generate electricity, power industry and heat our homes and businesses

More Energy Efficient than Fossil Fuels: Hydrogen contains nearly three times as much energy as fossil fuels, making it more energy efficient. Readily Available: Because green hydrogen can be produced wherever there is water and electricity to generate more heat and electricity, it is readily available for production.

Challenges:

1. High Production Costs: Extraction of Hydrogen by electrolysis of water requires electricity which is expensive.
2. Infrastructure: As of now, there are no facilities for the generation, storage, and delivery of green hydrogen.

3.Technological barriers: As of now the public doesn’t have awareness .

4.Economic Sustainability: One of the main obstacles to using hydrogen commercially is the extraction of green hydrogen.