

1) Compare and contrast between various theories of corrosion.

There are primarily three theories of corrosion: the Acid Theory, the Dry or Chemical Theory, and the Galvanic or Electrochemical (Wet) Theory.

**Acid Theory of Corrosion:** This theory suggests that the presence of acids in the environment accelerates the corrosion process, primarily affecting metals. The acids react with the metal, causing deterioration.

**Dry or Chemical Theory of Corrosion:** This theory posits that corrosion can occur even without moisture. It involves chemical reactions that take place when metals are exposed to certain gases, like oxygen or sulfur dioxide.

**Galvanic or Electrochemical Theory of Corrosion:** This is the most widely accepted theory and views corrosion as an electrochemical process. It involves redox reactions where metals undergo oxidation and reduction in the presence of an electrolyte, leading to corrosion primarily in moist environments.