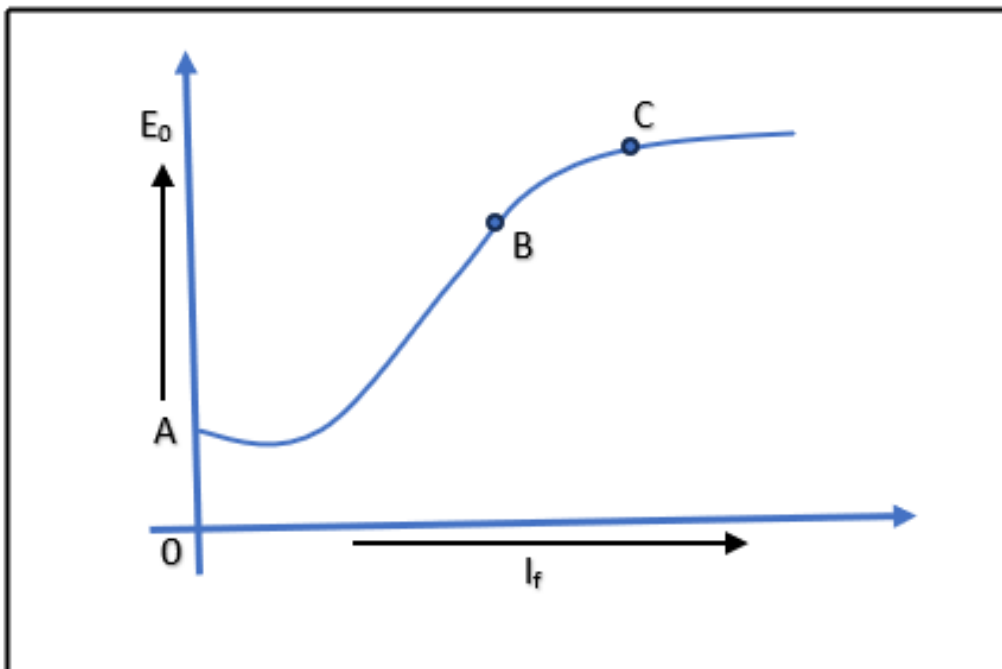
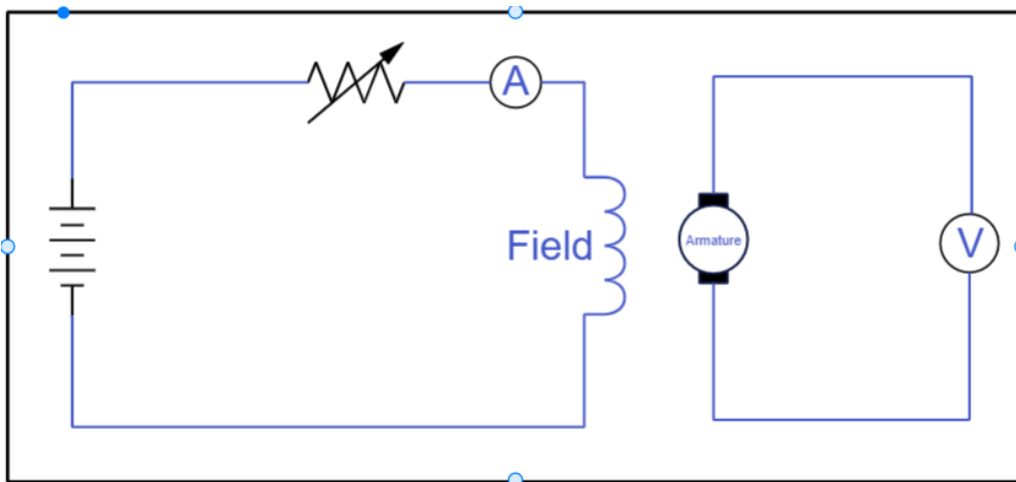




Open Circuit Characteristics (O.C.C) refer to the relationship between the **generated voltage (EMF)** and the **field current** in a generator (especially a DC generator), when the **armature is running at a constant speed** and **no load is connected**.

This is also called the **no-load characteristic of a generator**.

Open Circuit Characteristics



This curve shows the relation between the generated e.m.f at no load (E_o) and the



field current (I_f) at constant speed.

1. When the field current is zero (0), the generator still gives some small voltage.

- This happens because of residual magnetism (leftover magnetism in poles).

2. In the beginning part of the curve (up to point B) the Curve is straight (linear)

- This is because the iron does not resist magnetism much, and the air gap is the main resistance.

3. After point B, the curve starts to bend

- This is because the iron starts to resist magnetism (iron saturation starts).

4. After point c the curve becomes almost flat

- This means the generator can't increase voltage much more, even if we increase field current.

This happens due to magnetic saturation. The poles are already fully magnetized.