

Chapter 17

1. What is the function of the commutator and brushes in a DC generator?
2. What is the magnetic-neutral plane?
3. What is the function of interpoles? Where are they located?
4. What is armature reaction, what are its adverse effects, and how can it be eliminated?
5. Explain in detail how a self-excited generator builds up its voltage from a low value, initiated by residual magnetism, to its rated value.
6. When a relatively heavy load is connected to a DC generator, the speed and voltage output of the generator are reduced. Explain why this happens.
7. In what way does a compound generator differ from a shunt generator? Sketch the voltage vs. current characteristics of these generators, and explain why they are different.
8. Explain how an over-compound generator may be given a flat compound characteristic without changing the number of turns in the field windings and without changing the speed.