

ASSIGNMENT: 6 IMPORTANT QUESTION ON DC MOTOR & GENERATOR

1. Mention the parts of a DC machine. Explain the use of any one of them.
2. An 8-pole DC generator has 500 armature conductors and has a useful flux per pole of 0.065 Wb. What will be the emf generated if it is lap connected and runs at a speed of 1000 rpm? What must be the speed at which it must be driven to produce the same emf if it is wave wound?
3. Derive the equation of efficiency of DC machine as a motor and as a generator. Derive the emf equation of a DC generator.
4. What is the necessity of starter in a DC motor? Draw neat sketch of 3-point and 4-point starter by indicating its part.
5. Derive the torque equation of a DC motor from first principles.