
Assignment: 3

1. Derive the one dimensional momentum theory and Beltz's limit for the wind mill. Also state the assumption in theory and draw the variation of pressure and velocity in wind mill.
2. Explain with neat sketch the geometry of airfoil terminology. Also explain with neat sketch indicating the direction of lift force, drag force, pitching moment coefficient.
3. List the basic component of wind mill and draw the wind energy conservation system.
4. Explain importance of drag and lift force in wind power generation.
5. Describe the effect of different parameter on the power generating capacity of windmill. Also explain control mechanism of a wind turbine.
6. Prove that the maximum turbine output can be achieved when $V_e = V_i/3$, Where V_i and V_e are upstream and downstream velocities of the wind.