Sheet (2)

1- Find the magnitude of the torque produced by a 5 N force applied to a door at a distance 0.65 m from the hinge.

2- A bicycle wheel diameter 0.43 m rotate at 3 rps **calculate** linear velocity in SI, FPS, CGS systems.

3- **Calculate** the power of the rotating shaft rotate by torque= 12NM at 50 rpm.

4- If the mass of a wooden piece = 2.7 kg and occupied volume = 3 m^3 **calculate** density in SI, FPS, CGS systems.

5- Density of oil = 950 kg/m^3 **calculate** the mass of the oil in 4 m^3 tank in SI, FPS, CGS systems.

6- **Calculate** Specific weight of oil (ρ= 950 kg/m^3, g= 9.81) in SI, FPS, CGS systems.

7- If the mass of a wooden piece = 9 kg and occupied volume = 10 m^3 and (g= 9.81), **calculate** Specific weight in SI, FPS, CGS systems.

8- If the density of fresh water = 1000kg/m^3 **calculate** the specific gravity of oil (ρ = 950 kg/m^3).

9- **Calculate** the specific gravity of wood, then proof that SG is dimensionless quantity.