Standard Values : Physics 1st Year Lab (PH1102 / PH1202)

(Use these standard values for your experiment)

1. **Young's Modulus**
   - Brass = (1.02 -1.25) X 10^{11} N/m^2
   - Steel = 2 X 10^{11} N/m^2
   - Copper = 1.2 X 10^{11} N/m^2

2. **Surface Tension**

Density of Water	
Temperature (in ^{0}C)	**Density (in gm/cc)**
27	0.9965162
28	0.9962365
29	0.9959478
30	0.9956502
31	0.995344
32	0.9950292

   - **Surface Tension of water :** 7.12 x 10^{-2} N/m at 30 ^{0}C and 7.197 x 10^{-2} N/m at 25 ^{0}C

3. **Magnetic Field Mapping :** Number of Turns : 500

4. **Viscosity :**
   - Density of Steel : 7.85 gm/cm^3
   - Density of Castor Oil : 961 kg/m^3
   - Viscosity of Castor Oil : 0.650 Pa s

5. **Specific Heat :**

- Specific Heat of Water : 4.184 J/g ^{0}C
- Specific Heat of Copper : 0.385 J/g ^{0}C Molar Mass of Copper : 63.5 gm
- Specific Heat of Brass : 0.380 J/g ^{0}C Molar Mass of Brass : 64.28 gm
- Specific Heat of Iron : 0.444 J/g ^{0}C Molar Mass of Iron : 55.84 gm
- Specific Heat of Aluminum : 0.900 J/g ^{0}C Molar Mass of Aluminum : 26.98 gm
- Specific Heat of Calorimeter : 80 J/ ^{0}C

6. Acceleration due to gravity (g) at some places in India

Place	**Value(m/s^2)**
Agra	9.7906
Chennai	9.7828
Dehra Dun	9.7907
Jabalpur	9.7872
Kolkata	9.7882
Mumbai	9.7863