OBSERVATIONS:

Least count of micrometer screw gauge = ……………

Instrumental error of micrometer screw gauge = …………………

Least count of meter scale = …………………..

Least count of stop watch = ……………………

Density of solid ball, ρ = …………………..   (……………………………………………….)

Density of viscous liquid, σ = ……………………   (……………………………………….......……)

- **To find the radius of the steel balls:**

SN	Main scale reading a (cm)	Circular scale division C	Circular scale reading $b = C \times LC$ (cm)	Total reading (**Diameter**) $d = a + b$ (cm)	Corrected diameter d (cm)	Mean diameter	Radius
1.							
2.							
3.							
4.							
5.							

- **To find the terminal velovity and coefficient of viscosity:**

SN	Radius of steel ball r (cm)	Distance travelled by ball at steady state D (cm)	Time taken to travel distance D t (sec)	Terminal velocity $v_t = \frac{D}{t}$ (cm/s)	Coefficient of viscosity $\eta = \frac{2}{9} \frac{r^2 (\rho - \sigma)g}{Bv_t}$ (**poise**)	Mean η
1.						
2.						
3.						
4.						
5.						

CALCULATION

The mean value of coefficient of viscosity of the given liquid η = ……………… $poise$.

= ………………. decapoise (Nsm^{-2}).