PHY- 102 Experiment No: 01	Date: Intake: Section: ID:

Data Collection:

Data Table- 1: Reading for Measurement of the length of the sample (Iron block) (using slide Calipers)

Dimension to be measured	No. of obs.	Main scale reading (M.S.R) cm	Vernier scale divisions (V.S.D)	Vernier constant (V.C) cm	Vernier scale reading (V.S.R) = V.S.D X V.C cm	Total length/breadth/ Thickness, l/b/h Cm (MSR+ VSR)	Average	Volume of the Iron block (V) cm^3
Length of Iron block	1							
	2							
	3							
Breadth of Iron block	1							
	2							
	3							
Thickness of Iron block	1							
	2							
	3							

Table- 2: Reading for Measurement of the radius of the sample (Lead Shot) (using Screw Gauge)

No. of obs.	Liner scale reading (L.S.R) cm	Circular scale divisions (C.S.D)	Least count (L.C) cm	Circular scale reading (C.S.R) = (CSD * L.C)	Total diameter D Cm (LSR + CSR)	Mean diameter D cm	Volume of the Lead Shot (V) cm^3
1							
2							
3							

PHY- 102
Experiment No: 02

Date: **Intake:**
Section: **ID:**

Table 1: Data for time period

Starting direction	Hole no.	Distance from Top (cm)	Time for 10 oscillations (sec)	Mean Time, t (sec)	Mean Time Period, T (sec)
Forward	1	5	(i) (ii)		
	2	10	(i) (ii)		
	3	15	(i) (ii)		
	4	20	(i) (ii)		
	5	25	(i) (ii)		
	6	30	(i) (ii)		
	7	35	(i) (ii)		
	8	40	(i) (ii)		
	9	45	(i) (ii)		
Reverse	1	55	(i) (ii)		
	2	60	(i) (ii)		
	3	65	(i) (ii)		
	4	70	(i) (ii)		
	5	75	(i) (ii)		
	6	80	(i) (ii)		
	7	85	(i) (ii)		
	8	90	(i) (ii)		
	9	95	(i) (ii)		

PHY- 102 Experiment No: 03	Date: Section:	Intake: ID:

Table 1: Data of time period for different masses

No. of obs.	Loads m_0 gm	Extension l cm	Times for 10 oscillation		Total Period $T = \frac{t}{10}$ (Sec.)		Mean T Sec	T^2
			t_1	t_2				
1								
2								
3								
4								
5								
6								

PHY- 102 Experiment No: 04	Date: Intake: Section: ID:

Table 1: Data for load versus elongation

Additional Load on hanger (kg)	Readings for the elongation, x										Average depression x (cm)
	Load increasing					Load decreasing					
	MSR x (cm)	VSD N	VC (cm)	VSR y = N × $L.C.$ (cm)	Total Reading = x + y cm	MSR x (cm)	VSD N	VC (cm)	VSR y = N × LC (cm)	Total Reading = x + y cm	

Table 2: Measure the breadth, (b) of beam

No. of obs.	Main scale reading (M.S.R) cm	Vernier scale divisions (V.S.D)	Vernier constant (V.C) cm	Vernier scale reading (V.S.R) = (V.S.D X V.C) cm	Total breadth b (cm)	Mean Breadth b (cm)
1						
2						
3						

Table 3: Measure the depth, (d) of beam

No. of obs.	Main scale reading (M.S.R) cm	Vernier scale divisions (V.S.D)	Vernier constant (V.C) cm	Vernier scale reading (V.S.R) = (V.S.D X V.C) cm	Total depth d (cm)	Mean depth d (cm)
1						
2						
3						

PHY- 102 Experiment No: 05	Date: Intake: Section: ID:

Data collection:

1. Least count of the travelling microscope = Value of one MSD / Number of divisions on the Vernier

=0.5mm/50 = 0.01 mm = 0.001 cm

Table 1: Measurement of inside radius (r) of the tubes

Tube no.	Readings in cm for the bore										Difference diameter $D=X_2 \sim X_1$ (cm)	Radius $r = D/2$ (cm)
	Left side (X_2)					Right side (X_1)						
	M.S.R (cm)	V.S. D	V.C (cm)	V.S.R (cm)	Total Reading (x_1) cm	M.S.R (cm)	V.S. D	V.C (cm)	V.S.R (cm)	Total Reading (x_2) cm		
A												
B												

Table 2: Determination of the height of the column of water 'h':

No. of observation	Radius of the water meniscus					Reading at the tip of pointer					Height, h = h_1-h_2 cm
	MSR x (cm)	VSD N	LC (cm)	CSR y = N × L. C. (cm)	Total Reading = x + y h_1 cm	MSR x (cm)	VSD N	LC (cm)	CSR y = N × L. C. (cm)	Total Reading = x + y h_2 cm	
1											
2											
3											
4											
5											

PHY- 102 Experiment No: 06	Date: Intake: Section: ID:

Data Table:

Table 1: **Diameter of the fly-wheel (heavy cylinder)**

No. of obs.	Main scale reading (M.S.R) cm	Vernier scale divisions (V.S.D)	Vernier constant (V.C) cm	Vernier scale reading (V.S.R) = (V.S.D X V.C) cm	Total Diameter d (cm)	Mean Diameter d (cm)
1						
2						
3						

Table 2: Radius of the wire (using screw gauge)

No. of obs.	Liner scale reading (L.S.R) cm	Circular scale divisions (C.S.D)	Least count (L.C) cm	Circular scale reading (C.S.R) = (CSD X L.C)	Total diameter D cm	Mean diameter D cm	Mean radius r=D/2 cm
1							
2							
3							

Table 3: Reading for load-twist graph

No. of Obs.	Load in each hanger (gm)	Pointer reading in degrees				Mean pointer reading		Mean twist ($\varphi 2^\circ - \varphi 1^\circ$)
		Scale S_1		Scale S_2		S_1 ($\varphi 1^\circ$)	S_2 ($\varphi 2^\circ$)	
		Load increasing	Load decreasing	Load increasing	Load decreasing			
1	500							
2	1000							
3	1500							
4	2000							
5	2500							
6	3000							

PHY- 102 Experiment No: 07	Date: Intake: Section: ID:

Data collection:

Table 1: Readings for the Radius of the cylinder, R (using slide calipers)

No. of obs.	Main scale reading (M.S.R) cm	Vernier scale divisions (V.S.D)	Vernier constant (V.C) cm	Vernier scale reading (V.S.R) = (V.S.D * V.C) cm	Total diameter D (cm)	Mean diameter D (cm)	Mean radius R= D/2 (cm)
1							
2							
3							

Table 2: Radius of the wire, r (Using screw gauge)

No. of obs.	Liner scale reading (L.S.R) cm	Circular scale divisions (C.S.D)	Least count (L.C) cm	Circular scale reading (C.S.R) = (CSD * L.C)	Total diameter D cm	Mean diameter D cm	Mean radius r=D/2 cm
1							
2							
3							

Table 3: Reading for the time period T.

No. of obs.	Time for 30 oscillations (see)	Period of oscillation t(sec)	Mean T. (sec)
1			
2			
3			

PHY- 102 Experiment No: 08	Date: Section:	Intake: ID:

Data Table :-

Table 1: Data for pressure - temperature record

No. of observation	Temperature in °C	Reading in cm of the mercury level in the		Difference of two levels in cm $H=R_1 \sim R_2$	Pressure of gas in cm of mercury $P= P_o \pm h$
		Open limb (R_1)	Closed limb constant level at (R_2)		
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

PHY- 102 Experiment No: 09	Date: Intake: Section: ID:

Data Collection:

Table 1: Determination of angle of Prism

No. of obs.	Readings for image in the face AB of the prism					Readings for image in the face AC of the prism					Difference in readings at the two face (θ=M-N)	Mean (θ) of the two venires	Angle of the prism A=θ/2
	M.S.R	V.S.D	V.C	Value of V.S.R	Total Reading N	M.S.R	V.S.D	V.C	Value of V.S.R	Total Reading M			
1													
2													
3													

Table 2: Determination of angle of minimum deviation

No. of obs.	Readings for the minimum deviation position					Readings for the direct position					Angle of minimum deviation (δ_m)=(M-N)	Mean (δ_m)
	M.S.R	V.S.D	V.C	Value of V.S.R	Total Reading N	M.S.R	V.S.D	V.C	Value of V.S.R	Total Reading M		
1												
2												
3												

PHY- 102 Experiment No: 10	Date: Intake: Section: ID:

Data Collection:

Table 1: Diameter of the Specimen disc.

No. of obs.	Main scale reading (M.S.R) (cm)	Vernier scale divisions (V.S.D)	Vernier constant (V.C) (cm)	Vernier scale reading (V.S.R) = (V.S.D x V.C) (cm)	Total Diameter d (cm)	Mean Diameter d (cm)
1						
2						
3						

Table 2: Thickness of the disc shaped specimen.

No. of obs.	Liner scale reading (L.S.R) cm	Circular scale divisions (C.S.D)	Least count (L.C) cm	Circular scale reading (C.S.R) = (CSD x L.C)	Total diameter D cm	Mean diameter D cm	Mean radius r=D/2 cm
1							
2							
3							

Table 3: Time temperature record of B and A

Time in minutes	0	5	10	15	20	25	30	35	40	45	50
θ_1											
θ_2											

Table 5=4: Time temperature record of A during cooling

Time in minutes	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Temperature in °C θ_2										

5	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$

PHY- 102 Experiment No: 11	Date: Section:	Intake: ID:

Table: Data for time and Temperature

Time (Sec)	Temperature (°C)		Time (Sec)	Temperature (°C)
1			41	
2			42	
3			43	
4			44	
5			45	
6			46	
7			47	
8			48	
9			49	
10			50	
11			51	
12			52	
13			53	
14			54	
15			55	
16			56	
17			57	
18			58	
19			59	
20			60	
21			61	
22			62	
23			63	
24			64	
25			65	
26			66	
27			67	
28			68	
29			69	
30			70	
31			71	
32			72	
33			73	
34			74	
35			75	
36			76	
37			77	
38			78	
39			79	
40			80	

PHY- 102 Experiment No: 12	Date: Intake: Section: ID:

Data Collection:

1. Distance between K_1 and CG (l_1)=……..cm
2. Distance between K_2 and CG (l_2)=……..cm
3. Table for time period T_1 (oscillation about K_1)

No. of Observation	Number of Oscillation, n	Time of Oscillation t_1 (sec)	Time Period $T_1 = t_1/n$ (sec)	Mean Time T_1 (sec)
1				
2				
3				
4				
5				

4. Table for time period T_2 (oscillation about K_1)

No. of Observation	Number of Oscillation, n	Time of Oscillation t_1 (sec)	Time Period $T_2 = t_1/n$ (sec)	Mean Time T_2 (sec)
1				
2				
3				
4				
5				