

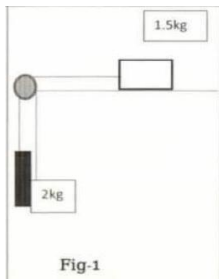
Assignment for students participating in the HSC Examination of 2022

Subject: Physics

Paper: 1<sup>st</sup>

Sub. Code: 174

Class: HSC

Assign ment No.	Assignment	Learning outcomes/ Content	Instruction (Symbol/Step/ Depth)	Assessment Criteria							Comments			
1.	<div></div> <p>A cricket ball of mass 400gm is thrown vertically upward with a velocity <math>20\text{ms}^{-1}</math>.</p> <p>(a) Draw the Velocity vs Time graph for the ball.</p> <p>(b) What will be the velocity at the hieghst point of trajectory?</p> <p>(c) What will be the Acceleration at that point?</p> <p>(d) What will be the resultant force acting on the ball at that point?</p> <p>(e) In Fig-1 , a body of mass 1.5 kg is kept rest on the table and another body of mass 2kg hanging with an unexpandable rope.The coefficient of friction between table and 1.5kg mass is 0.2.</p> <p>1. What are the acceleration of two masses. Is there any change of your answer if the rope is expandable?</p> <p>2. what is tension of the rope?</p> <p>3. Draw the Displacement vs Time graph for 2kg mass.</p>	<p>1. Students will able to analyse graphs of position versus time and Velocity versus time.</p> <p>2. Students will able to explain the laws of falling body.</p> <p>3. Students will able to explain intuitive concept of force.</p>	Dynamics and Newtonian Mechanics		Order	Indicator	Level of expertise					Total		
							4	3	2	1				
					(a)	Accurately draw the graph by determining the required data.	✓					4		
						Draw the graph by determining the required data.		✓						
						Draw the graph without determining the required data.			✓					
						Just presenting ideas				✓				
					(b)	Presenting acceptable answers (including units) with necessary information and mathematical formulas.			✓			2		
						Introducing mathematical formulas				✓				
					(c)	Presenting acceptable answers with mathematical formulas.			✓			2		
						Introducing mathematical formulas				✓				
					(d)	Presenting acceptable answers with mathematical formulas.			✓			2		
						Introducing mathematical formulas				✓				
					(e) 1.	Determine the acceptable answers (including units) with necessary information and mathematical formulas and presenting necessary explanation.	✓				3			
						Determine the acceptable answers (including units) with necessary information and mathematical formulas.			✓					
						Introducing mathematical formulas/presenting explanation.				✓				
					(e) 2	Determining values by applying mathematical formulas correctly.		✓			3			
						Presenting data and mathematical formulas.			✓					
						presenting ideas				✓				

					<div><div>(e) 3</div><div><div>Accurately draw the graph by determining the required data.</div><div>Draw the graph by determining the required data.</div><div>Draw the graph without determining the required data.</div><div>Just presenting ideas</div></div><div><table><tr><td>✓</td><td></td><td></td><td></td></tr><tr><td></td><td>✓</td><td></td><td></td></tr><tr><td></td><td></td><td>✓</td><td></td></tr><tr><td></td><td></td><td></td><td>✓</td></tr></table></div><div>4</div></div>	✓					✓					✓					✓	
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