

# Assignment for SSC Examinees, 2021

**Subject: Physics**

**Subject Code: 136**

**Level: SSC**

Assignment Number, Chapter Number, Chapter Title	Assignment	Learning Outcomes	Guidelines (cues/steps or stages)	Assessment Criterion /Rubric	Com'ts																																														
<b>Assignment number: 01</b>  <b>Chapter 01:</b> Physical Quantities and Their Measurement	<p><b>Simple instrument and its usage</b>                      You need a thick art paper to prepare a model project. On the other hand, the stationary store you know is not even opening due to Covid- 19 pandemic. The only stationary store that is open now has a bad reputation in the locality for being dishonest. But you are somewhat compelled now to buy paper from him. The shopkeeper is claiming that the value of the paper which he supplied you is <math>160 \text{ gm/m}^2</math>.                      The size of per sheet of modeling paper is <math>65\text{cm} \times 75\text{cm}</math>. You decided that you will verify the shopkeeper. The measuring tape you have at home cannot measure anything that is less than 2 cm. And also, the digital balance which you have in your house for measuring the mass of the cooking ingredients does not record any mass bellow 20gm. This means that if you want to measure the mass of an 8 grams object accurately, you have to take 5 objects. So that their combined mass is 40 grams which is a multiple of 20 grams. You have no scope to use any other instrument.</p> <p>a) What is the dimension of the unit by which the value of the paper is being measured? (1)                      b) What will be its unit if it is measured in Kilogram? (2)                      c) What is the least number of papers you need to buy to be sure about this matter?</p>	Students will be able to determine the area and volume of the uniform body by using simple instruments	Follow the text on pages 18-27 of the textbook.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 15%;">Indicator</th> <th colspan="4" style="width: 65%;">Rating Scale</th> <th rowspan="2" style="width: 15%;">Score</th> </tr> <tr> <th style="width: 15%;">4</th> <th style="width: 15%;">3</th> <th style="width: 15%;">2</th> <th style="width: 15%;">1</th> </tr> </thead> <tbody> <tr> <td>a) Dimension</td> <td></td> <td></td> <td></td> <td>If Students can write the dimension</td> <td></td> </tr> <tr> <td>b) S I Units</td> <td></td> <td></td> <td>If Students can change in Kg</td> <td>If Students can write S I unit</td> <td></td> </tr> <tr> <td>c) Measurement</td> <td></td> <td>If Students can show logic in favour of the calculation</td> <td>If Students can write the correct number</td> <td>If Students can write any number</td> <td></td> </tr> <tr> <td>d) Final Measurement</td> <td>If Students can write accurate calculation with units</td> <td>If Students can write accurate calculation</td> <td>If Students can calculate</td> <td>If Students can write the equation of accurate measurement</td> <td></td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>Total</b></td> <td></td> </tr> <tr> <td colspan="6"><b>Total marks for this assignment:10</b></td> </tr> </tbody> </table>	Indicator	Rating Scale				Score	4	3	2	1	a) Dimension				If Students can write the dimension		b) S I Units			If Students can change in Kg	If Students can write S I unit		c) Measurement		If Students can show logic in favour of the calculation	If Students can write the correct number	If Students can write any number		d) Final Measurement	If Students can write accurate calculation with units	If Students can write accurate calculation	If Students can calculate	If Students can write the equation of accurate measurement		<b>Total</b>						<b>Total marks for this assignment:10</b>						
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Give logic in favour of your calculation. (3)  
d) If the value of each paper written on the packet as  $(120 \pm 0.5)$  gm/m<sup>2</sup>, it means that the value is actually in between 119.5 to 120.5 units. Here the final error is 0.5 units. Determine the accuracy of your measured value? (4)

Marks Obtained	Comments
09-10	Excellent
07-08	Very good
05-06	Good
0-04	Needs improvement