Assignment for SSC Examinees, 2021

Subject: Physics **Subject Code: 136** **Level: SSC**

<table>
<tr><th>Assignment Number, Chapter Number, Chapter Title</th><th>Assignment</th><th>Learning Outcomes</th><th>Guidelines (cues/steps or stages)</th><th>Assessment Criterion /Rubric</th><th>Com’ts</th></tr>
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<td>2

Chapter 02:
Motion</td>
<td>Speed and its quantities
Two engineering university admission test examinees, Rabbi and Sajol, live in two different houses located on a straight street along the examination hall. They have been asked to report to the examination hall gate by 9 am - after which the gate will be closed. The house of Rabbi is 200 m more away than that of Sajol’s house from the exam hall. Sajol woke up late in the morning due to overnight Facebooking. Somehow, after having a hurried breakfast and a few harsh words from his parents, Sajol came to the gate of his house and saw that Rabbi was walking at a constant velocity and if he walked at this velocity, he would reach the gate just in time. But it is impossible for Sajol, in a full stomach, to advance more than 10 seconds at the maximum uniform acceleration 1 m/sec^2. And for the rest of the time he will be able to run at half of this maximum velocity. It is now 8:58 in the morning. If Sajol continues in this way, he will be able to enter the exam hall at the last moment.</td>
<td>Students will be able to analyze the inter relationship between the quantities related to motion.</td>
<td>Follow the text on pages 45-52 of the textbook.</td>
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<table>
<tr><th rowspan="2">Indicator</th><th colspan="4">Rating Scale</th><th rowspan="2">Score</th></tr>
<tr><th>4</th><th>3</th><th>2</th><th>1</th></tr>
<tr><td>a)Distance</td><td></td><td></td><td>If Students can find out the value of distance with correct unit</td><td>If Students can write the equation to determine the distance</td><td></td></tr>
<tr><td>b) Velocity</td><td></td><td></td><td>If Students can write the value of velocity with explanation</td><td>If Students can write the value of velocity</td><td></td></tr>
<tr><td>c) Distance, Velocity</td><td>If students can properly explain whether they, Rabbi & Sajol, can enter the exam hall or not</td><td>If Students can find out the value of distance with correct/exact unit</td><td>If Students can relate velocity with distance</td><td>If Students can write the equation of distance</td><td></td></tr>
<tr><td>d) Graph</td><td></td><td></td><td>If Students can show the positions of total 8 points on the graph correctly</td><td>If Students can draw the graph</td><td></td></tr>
<tr><td colspan="5">Total</td><td></td></tr>
<tr><td colspan="6">Total marks for this assignment:10</td></tr>
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	a) How far is Sajol's house from the examination hall? (2) b) Rabbi decided night before the exam that he would leave the house at 8:44amand will arrive at the exam hall by 8:55 a.m.Then at what velocityhe has to move forward? (2) c)At this velocity, after advancing 50 meters crossing the gate of Sajol's house, suddenly Rabbi's ankle sprained. And, after that Rabbi started moving at a velocity of one fourth of his previous velocity. In such circumstances, will Sajol pass him over before entering the exam hall? (4) d)Draw a graph showing the road location of Rabbi and Sajol between 8:58 am to 9 am. For each of them you have to show at least four points (in total 8 points). (2)				

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