

# Assignment for SSC Examinees, 2021

Subject: Chemistry

Subject Code: 137

Level: SSC

Assignment Number, Chapter Number, Chapter Title	Assignment	Learning Outcomes	Guidelines (cues/steps or stages)	Assessment Criterion /Rubric					Com'ts
<b>03</b>  <b>Chapter Three:</b>  Structure of Matter  and  <b>Chapter Four:</b>  Periodic Table	<b>Observation of chemical reaction, Chemical equation and description of the identification method of produced gas and determination of the molecular mass of washing soda or baking soda</b>  a) Take one tablespoon of washing soda or baking soda in a transparent glass  b) Add two tablespoons of vinegar or lemon juice with it  c) Observe the changes.  Prepare a report on chemical equation of reaction, identification method of produced gas and determination of the molecular mass of washing soda or baking soda.	Students' will be ..... • Able to explain atomic number, mass number and relative atomic number  • Able to calculate the relative molecular mass from relative atomic mass  • Able to explain the same properties of compounds formed by elements of same group in the periodic table  • Able to use the equipments of glass properly during experiment.  • Able to take precautions during experiment	•Has to take the experiment precautions while performing works  •The matters that should be in the report- •Use of experiment materials with precautions •Chemical equation by observing chemical changes  •Identification of produced gas and chemical equation  •Determination of the molecular mass of main elements of washing soda or baking soda.	Indicator	Rating Scale				Score
					4	3	2	1	
				a) Use of experiment materials	Has used the proper experiment materials appropriately with precautions and drawn the figure	Has used the proper experiment materials appropriately and drawn the figure	Has used the proper experiment materials appropriately	Has Drawn the experiment figure	
				b) Observation of chemical changes during experiment	Has described the reaction with the name of reactants and produced compounds and written the equation properly	Has described the reaction with the name of reactants and produced compounds	Has written correct chemical equation	Has written the produced compounds	
				c) Identification of produced gas	Has written the physical and chemical methods of identification of produced gas with name and also chemical equation properly	Has written chemical method of identification of produced gas with name and also chemical equation properly	Has written the physical methods of identification of produced gas with name	Has identified the produced gas	
				d) Determination of the molecular mass of main elements of washing soda or baking soda.	Has calculated the relative molecular mass of corresponding compound properly by mentioning the relative atomic mass	Has calculated the relative molecular mass of corresponding compound properly	Has calculated the relative molecular mass of corresponding compound briefly	Has mentioned the relative molecular mass of corresponding compound	
<b>Total</b>					<b>Total marks for this assignment: 16</b>				

Marks Obtained	Comments
13-16	Excellent
11-12	Very good
08-10	Good
0-07	Needs improvement

## Assignment for SSC Examinees, 2021

Subject: Higher Mathematics

Subject Code: 126

Level: SSC

Assignment Number, Chapter Number, Chapter Title	Assignment	Learning Outcomes	Guidelines (cues/steps or stages)	Assessment Criterion /Rubric	Com'ts																																								
<b>03</b>  Chapter Eight  Trigonometry	<b>The solution of radian measurement and degree measurement related problems:</b>  Mr. Ratul in his regular morning walk makes a round of a circular park of two kilometers circumference maintaining equal velocity. He starts his round at 6.45 and finishes at 7.25 in the morning.	<b>Students will be able to:</b>  1. Explain the concept of radian measurement.  2. Determine the relation between radian measurement and degree measurement.	<b>Students will answer in the following manner:</b> a. Determine the angle created at the centre of the park with the distance which Mr. Ratul covers right at 7 am in the morning. b. Express the angle between minute and hour hands of the clock in radian at the time of his start of the walk. c. Express your logic whether the angle at the centre will be changed or not if someone walks the equal distance of the radius throughout the circumference of the circle.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 10%;">Indicator</th> <th colspan="4" style="width: 80%;">Rating Scale</th> <th rowspan="2" style="width: 10%;">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 style="text-align: center;"><b>a</b></td> <td>Expressed in degree.</td> <td>Found the value of the angle in the radian.</td> <td>Found the distance.</td> <td>Found the radius of the park.</td> <td></td> </tr> <tr> <td style="text-align: center;"><b>b</b></td> <td>Expressed in radian</td> <td>Found the angle between two hands of the clock in degree.</td> <td>Found the difference between the two hands of the clock.</td> <td>Identified the position of the hour hand at the start of walk.</td> <td></td> </tr> <tr> <td style="text-align: center;"><b>c</b></td> <td>Analyzed the result and then expressed the opinion.</td> <td>Established the relation between arc of the circle and central angle produced by arc.</td> <td>Showed through the radius, the arc equal to radius and the length of the arc produced right angle at the centre into the radius.</td> <td>Drew the graph necessary to express opinion</td> <td></td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>Total-</b></td> <td></td> </tr> <tr> <td colspan="6" style="text-align: center;"><b>Total marks for this assignment: 12</b></td> </tr> </tbody> </table>	Indicator	Rating Scale				Score	4	3	2	1	<b>a</b>	Expressed in degree.	Found the value of the angle in the radian.	Found the distance.	Found the radius of the park.		<b>b</b>	Expressed in radian	Found the angle between two hands of the clock in degree.	Found the difference between the two hands of the clock.	Identified the position of the hour hand at the start of walk.		<b>c</b>	Analyzed the result and then expressed the opinion.	Established the relation between arc of the circle and central angle produced by arc.	Showed through the radius, the arc equal to radius and the length of the arc produced right angle at the centre into the radius.	Drew the graph necessary to express opinion		<b>Total-</b>						<b>Total marks for this assignment: 12</b>						
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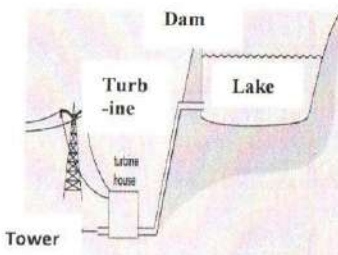
Marks Obtained	Comments
10-12	Excellent
08-09	Very good
06-07	Good
00-05	Needs improvement

# Assignment for SSC Examinees, 2021

Subject: Physics

Subject Code: 136

Level: SSC

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<p><b>4</b> <b>Chapter 04:</b> Work, Power and Energy</p>	<p>The story of renewable energy Hydroelectricity is one of the ancient sources of energy that is used to generate electricity around the world, especially in remote areas. As there are many rivers, the possibility can be exploited in Bangladesh as well. The figure shows a hydroelectric power station</p> <div style="text-align: center;">  <p>The diagram illustrates a hydroelectric power station. It features a dam on the right side that creates a reservoir labeled 'Lake'. Water flows from the lake through a 'Turbine' which is connected to a 'Turbine house'. Below the turbine house is a 'Tower'. The entire setup is used to generate electricity.</p> </div> <p>Fig: A hydroelectric power station</p> <p>a) Which position in the figure has the minimum potential energy of water? <span style="float: right;">1</span> In 30 minutes, water loses <math>5.0 \times 10^9</math> J energy and generates <math>4.5 \times 10^9</math> J electric energy</p> <p>b) Determine the efficiency of energy transformation. <span style="float: right;">2</span></p> <p>c) Express <math>4.5 \times 10^9</math> J electric energy in Watt (W) unit. <span style="float: right;">1</span></p> <p>d) Analyze the impact of hydroelectric plants on the environment of Bangladesh. <span style="float: right;">2</span></p> <p>e) What kind of energy is hydroelectricity? Create a chart describing the economic, social and environmental impacts of such other forces. <span style="float: right;">4</span></p>	<p>Students will be able to analyze the contribution of major sources of energy considering the economic, social and environmental impact.</p> <p>Students will be able to explain power.</p> <p>Students will be able to measure efficiency.</p>	<p>Follow the text on pages 110-112 of the textbook.</p> <p>Follow the text on pages 119-120 of the textbook.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <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> </thead> <tbody> <tr> <td>a) Concept of potential energy</td> <td></td> <td></td> <td></td> <td>If Students can write the name of position</td> <td></td> </tr> <tr> <td>b) Determination of efficiency</td> <td></td> <td></td> <td>If Students can determine efficiency with correct unit</td> <td>If Students can write the equation by identifying the different quantities to determine the efficiency</td> <td></td> </tr> <tr> <td>c) Transformation of one unit of energy from another.</td> <td></td> <td></td> <td></td> <td>If Students can transform one unit of energy from another.</td> <td></td> </tr> <tr> <td>d) Contribution of major sources of energy considering the environmental impact.</td> <td></td> <td></td> <td>Comparative analysis mentioning good effects and bad effects on the environment</td> <td>If Students can mention only good impacts on the environment</td> <td></td> </tr> <tr> <td>The contribution of energy sources in considering the economic, social and environmental impact</td> <td>If Students can create a chart describing the economic, social and environmental impacts of all the energy mentioned in the textbook.</td> <td>If Students can describe the economic, social and environmental impact of at least two forces</td> <td>If Students can write the name of other sources.</td> <td>If Students can write what kind of energy is hydroelectricity</td> <td></td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>Total-</b></td> <td></td> </tr> <tr> <td colspan="6" style="text-align: center;">Total marks for this assignment:10</td> </tr> </tbody> </table>	Indicator	Rating Scale				Score	4	3	2	1	a) Concept of potential energy				If Students can write the name of position		b) Determination of efficiency			If Students can determine efficiency with correct unit	If Students can write the equation by identifying the different quantities to determine the efficiency		c) Transformation of one unit of energy from another.				If Students can transform one unit of energy from another.		d) Contribution of major sources of energy considering the environmental impact.			Comparative analysis mentioning good effects and bad effects on the environment	If Students can mention only good impacts on the environment		The contribution of energy sources in considering the economic, social and environmental impact	If Students can create a chart describing the economic, social and environmental impacts of all the energy mentioned in the textbook.	If Students can describe the economic, social and environmental impact of at least two forces	If Students can write the name of other sources.	If Students can write what kind of energy is hydroelectricity		<b>Total-</b>						Total marks for this assignment:10						
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07-08	Very good
05-06	Good
0-04	Needs improvement