YEAR 11 A/D/E – CHEMISTRY (Girls)

WEEK 5 (27th September to 1st October)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic:– SC15a: Fertilisers and Haber Process
SC12a: Dynamic Equilibrium

Resources: Text book, Worksheet, Boardworks powerpoint

Date	Topic	
27.09.20 Sunday 8th period **Mode of Teaching:** Zoom	**Learning Objective:** To discuss the questions based on chemical calculations, in the worksheet. **Learning Outcome:** Students will be able to reinforce the concepts learned in the previous lessons by answering the questions in the worksheet.	Teacher discusses the questions in the worksheets assigned and clarifies doubts.
28.09.20 Monday 4th period **Mode of Teaching:** Zoom	**Learning Objective:** Describe the Haber process as a reversible reaction between nitrogen and hydrogen to form ammonia. Recall that fertilisers may contain nitrogen, phosphorus and potassium compounds to promote plant growth. Describe how ammonia reacts with nitric acid to produce a salt that is used as a fertiliser. **Learning Outcome:** Recall the uses and composition of fertilisers Write balanced chemical reactions to make fertilizers from ammonia and various acids	Teacher uses powerpoint presentation that contains interactive questions to explain importance of fertilizers and the methods of producing them.
30.09.20 Wednesday 8th period **Mode of Teaching:** Zoom	**Learning Objective:** Describe and compare: **a** the laboratory preparation of ammonium sulfate from ammonia solution and dilute sulfuric acid on a small scale **b** the industrial production of ammonium sulfate, used as a fertiliser, in which several stages are required to produce ammonia and sulfuric acid from their raw materials and the production is carried out on a much larger scale **Learning Outcome:** **Evaluate** the laboratory preparation of ammonium sulfate from	Teacher uses powerpoint presentation to compare the laboratory and industrial processes for the manufacture of ammonium sulphate.

	ammonia solution and dilute sulfuric acid on a small scale and the industrial production of ammonium sulfate, Analyse the uses and production of ammonia based fertilizers.	
01.10.20 Thursday 5th Period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that chemical reactions are reversible, the use of the symbol ⇌ in equations and that the direction of some reversible reactions be altered by changing the reaction conditions. Explain what is meant by dynamic equilibrium. **Learning Outcome:** Define reversible reactions. Explain the significance ⇌ in equations. Cite **some** examples of reversible reactions. Define dynamic equilibrium. Suggest **some** examples of reactions in dynamic equilibrium.	Teacher uses powerpoint presentation that contains interactive questions, to explain the terms reversible reactions and dynamic equilibrium.
01.10.20 Thursday 6th Period **Mode of Teaching:** GC	**Learning Objective:** To answer the questions, on Fertilisers and the Haber Process, in the worksheet. **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by answering the questions in the worksheet	Worksheet assigned through GC. Instruction will be given in the GC to complete the worksheet and turn in

HOMEWORK: Complete the textbook questions SC15a:Fertilisers and Haber Process- page 120-121

YEAR 11 B/C/F – CHEMISTRY (Boys)

WEEK 5 (27th September to 1st October)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic:– SC15a: Fertilisers and Haber Process
SC12a: Dynamic Equilibrium

Resources: Text book,Worksheet, Boardworks powerpoint

Date	**Topic**	
27.09.20 Sunday 1st Period **Mode of Teaching:** Zoom	**Learning Objective:** To discuss the questions based on chemical calculations, in the worksheet. **Learning Outcome:** Students will be able to reinforce the concepts learned in the previous lessons by answering the questions in the worksheet.	Teacher discusses the questions in the worksheets assigned and clarifies doubts.
27.09.20 Sunday 2nd Period **Mode of Teaching:** Zoom	**Learning Objective:** Describe the Haber process as a reversible reaction between nitrogen and hydrogen to form ammonia. Recall that fertilisers may contain nitrogen, phosphorus and potassium compounds to promote plant growth. Describe how ammonia reacts with nitric acid to produce a salt that is used as a fertiliser. **Learning Outcome:** Recall the uses and composition of fertilisers Write balanced chemical reactions to make fertilizers from ammonia and various acids.	Teacher uses powerpoint presentation that contains interactive questions to explain importance of fertilizers and the methods of producing them.
28.09.20 Monday 3rd Period **Mode of Teaching:** Zoom	**Learning Objective:** Describe and compare: **a** the laboratory preparation of ammonium sulfate from ammonia solution and dilute sulfuric acid on a small scale **b** the industrial production of ammonium sulfate, used as a fertiliser, in which several stages are required to produce ammonia and sulfuric acid from their raw materials and the production is carried out on a much larger scale **Learning Outcome:** **Evaluate** the laboratory preparation of ammonium sulfate from ammonia solution and dilute sulfuric acid on a small scale and the industrial production of ammonium sulfate,	Teacher uses powerpoint presentation to compare the laboratory and industrial processes for the manufacture of ammonium sulphate.

	Analyse the uses and production of ammonia based fertilizers.	
29.09.20 Tuesday 7th Period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that chemical reactions are reversible, the use of the symbol ⇌ in equations and that the direction of some reversible reactions be altered by changing the reaction conditions. Explain what is meant by dynamic equilibrium. **Learning Outcome:** Define reversible reactions. Explain the significance ⇌ in equations. Cite **some** examples of reversible reactions. Define dynamic equilibrium. Suggest **some** examples of reactions in dynamic equilibrium.	Teacher uses powerpoint presentation that contains interactive questions, to explain the terms reversible reactions and dynamic equilibrium.
01.10.20 Thursday 4th Period **Mode of Teaching:** GC	**Learning Objective:** To answer the questions, on Fertilisers and the Haber Process, in the worksheet. **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by answering the questions in the worksheet	Worksheet assigned through GC. Instruction will be given in the GC to complete the worksheet and turn in

HOMEWORK: Complete the textbook questions SC15a:Fertilisers and Haber Process- page 120-121

YEAR 11 G/H–CHEMISTRY (IGCSE)

WEEK 5(27th Sept to 1st Oct)

Work Sent to the students through Google classroom/Zoom Learning Platform
Unit 3 – Chapter 19: Energetics
Topic: Calculation of enthalpy changes of a reaction using bond energies.
Resources: Text book, Worksheet, IGCSE science free lesson video, power point.

Date	Lesson	Topic	Mode of Teaching	
27.09.2020 Sunday	1 11**H** 6 **11G**	**Lesson Objective:** Calculate the molar enthalpy change (ΔH) from the heat energy change, Q **Learning Outcome**: Develop skill in calculating enthalpy change for the reaction using experimental data. Appreciate the use of sign +/- in enthalpy change calculation.	**Zoom**	Teacher uses power point presentation to sow the calculation of heat energy change, Q
28.09.2020 Monday	2 **11H** 5 **11G**	**Lesson Objective:** Develop skill in using energy profile using a graph **Learning Outcome:** Draw and explain energy level diagrams to explain exothermic & endothermic reactions.	**Zoom**	Teacher uses text book that contains the drawing of energy level diagram and energy profile diagram.
29.09.2020 Tuesday	3 **11H** 1 **11G**	**Lesson Objective:** Calculation of enthalpy changes of reactions using bond energies. **Learning Outcome:** Develop skill in calculating enthalpy using bond energies	**Zoom**	Teacher uses a PowerPoint presentation to explain the calculation.
	4**11H** 2 **11G**	**Lesson Objective:** Describe experiments to investigate the effects of changes in the surface area, concentration, temperature and use of catalyst on the rate of a reaction. **Learning Outcome**: Select a correct practical method to determine the rate of a reaction.	**Zoom**	Teacher uses PowerPoint presentation that contains interactive questions
01.10. 2020	5 **11H** 4 **11G**	**Lesson Objective:** Describe the effects of changes in the surface area, concentration, pressure of a gas &	**GC**	Instruction will be given in the GC room to complete the

Thursday		temperature on the rate of a reaction in terms of particle collision theory **Learning Outcome**: State the collision theory. Discuss the role of energy in collisions during the reactions		textbook and worksheet questions.