YEAR 13 A /B –CHEMISTRY

WEEK 12 (15th Nov to 19th Nov)

Topic: further organic chemistry.
Carbonyl compounds and their chemical properties.

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

Resources: Text book, Worksheets, video, power point presentations.

Date	**Topic**	
15.11.20 Sunday **1-13A** **4-13B** **Mode of Teaching –** Zoom	**Lesson Objective:** understand the reactions of carbonyl compounds with: i Fehling's or Benedict's solution, Tollens' reagent and acidified dichromate(VI) ions *In equations, the oxidising agent can be represented as [O]* **Success Criteria: students will be able to:** Show that oxidation can be used to distinguish between aldehydes and ketones, using acid. potassium dichromate, Fehling's, Tollen's reagent, benedict's solution **Write ionic equations for Tollen's and Fehling's test.** Write the addition to carbonyl compounds to show racemic mixture formatio	Teacher uses power point presentation that contains interactive questions. Students solve the worksheet file questions.
Sunday 15.11.20 **2-13 A** 17.11.20 Tuesday **2-13B** **Mode of Teaching –** Zoom	**Lesson Objective:** ii lithium tetrahydridoaluminate (lithium aluminium hydride) in dry ether *In equations, the reducing agent can be represented as [H]* **Success Criteria: students will be able to:** Apply that the reduction using $LiAlH_4$ gives back the 1^o and 2^o alcohol it came from.	Teacher uses power point presentation that contains interactive questions On different reagents. Students solve the worksheet file questions.
Wednesday 18.11.20 **4- 13A** **2-13B** **Mode of Teaching –** Zoom	**Lesson Objective:** iii HCN, in the presence of KCN, as a nucleophilic addition reaction, using curly arrows, relevant lone pairs, dipoles and evidence of optical activity to show the mechanism iv 2,4-dinitrophenylhydrazine (2,4-DNPH), as a qualitative test for the presence of a carbonyl group and to identify a carbonyl compound given data for the melting temperatures of derivatives	Teacher uses power point presentation that contains interactive questions that helps to predict the products of different reactions.

	The equation for this reaction is not required v iodine in the presence of alkali **Success Criteria: students will be able to:** **Outline the mechanism** for nucleophilic addition reactions of aldehydes and ketones with hydrides, such as HCN, $NaBH_4$ and formation of racemic mixture. Explain and write equation for the lab prep of 2,4-dinitrophenylhydrazones for identification purposes with reference to recrystallisation and m.pt determination **Write equation, observation for the iodoform reaction**.	Students solve the worksheet file questions .

Homework : Solve worksheet file questions and text book questions page 177.

YEAR 13 A/B– CHEMISTRY

WEEK 12 (15th Nov to 19th Nov)

Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– Further Kinetics

Resources: Text book, Worksheet, Video, Board works , power point

Date	Topic	
15.11.20 Sunday 4 **13A** 5 **13B** **Mode of Teaching –** Zoom	**Learning Objective:** Reinforce the concept of determining the rate equations of the form: rate = k[A]^m[B]^n, where m and n are 0, 1 or 2 **Learning Outcome:** Write the rate equation for a given reaction. Calculate rate and rate constant for different reactions.	Teacher uses worksheet that contains interactive questions, to solve the questions on rate of reaction, rate equation, order and rate constant, activation energy.
15.11.20 Sunday 8 **13B**	**Learning Objective:** Calculate the rate of reaction and the half-life of a first-order reaction using data from a concentration-time or a volume-time graph	Teacher uses textbook questions and power point to introduce the

18.11.2020 Wednesday 5 **13A** **Mode of Teaching –** Zoom	**Learning Outcome:** Write rate equations of the form: rate = k[A]^m[B]^n, where m and n are 0, 1 or 2 for all the reactions. Predict and deduce from a rate-concentration graph, the order with respect to a reactant.	concept of rate equations. Students write rate equations for different reactions and discuss for the whole class.
17.11.20 Tuesday 1 **13B** 18.11.2020 Wednesday **6 13A** **Mode of Teaching –** Zoom	**Learning Objective:** Solve questions on order of reactions. Understand experiments that can be used to investigate reaction rates by: i an initial-rate method, carrying out separate experiments where different initial concentrations of one reagent are used A 'clock reaction' is an acceptable approximation of this method ii a continuous monitoring method to generate data to enable concentration time or volume-time graphs to be plotted **Learning Outcome:** Pupils vary concentration of $Na_2S_2O_3$ and time how long it takes for sulphur precipitate to form – S clock Also use iodine clock method Predict from a concentration-time graph, the rate of a reaction	Teacher uses PowerPoint presentation and video or animation to demonstrate any reaction to explain the different terms. Question from textbook and worksheet are given to solve. Discuss the answers for the whole class.

HOMEWORK: Solve textbook question page 152