

YEAR 13 A /B –CHEMISTRY

WEEK 11 (8th Nov to 12th November)

Topic: further organic chemistry.

Carbonyl compounds and their properties.

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

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

| Date | Topic | |
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| 8.11.20 Sunday 1-13A 4-13B Mode of Teaching – Zoom | Lesson Objective: Racemic mixture and its correlation to SN1 and SN2 reactions Success Criteria: students will be able to: Predict why mixture of optical isomers may be optically active/ inactive. Correlate that S _N 2 results in inversion of rotation and S _N 1 forms a racemic mixture. Write the mechanism to prove the inversion of optical rotation Write the addition to carbonyl compounds to show racemic mixture formation | Teacher uses power point presentation that contains interactive questions. Students solve the worksheet file questions. |
| Sunday 8.11.20 2-13 A 10.11.20 Tuesday 2-13B Mode of Teaching – Zoom | Lesson Objective: Write the general formula for simple aldehydes and ketones, C _n H _{2n} O Write functional group isomers for carbonyl compounds Write systematic names of given carbonyl compounds. Success Criteria: students will be able to: -Write the general formula for simple aldehydes and ketones, C _n H _{2n} O -Predict the molecular and structural formulae of simple aldehydes and ketones (including branched structures) with up to three /six carbons in the main chain -Use IUPAC rules to name simple aldehydes and ketones (including branched structures) with up to three /6 carbon atoms in main chain | Teacher uses power point presentation that contains interactive questions. Students solve the worksheet file questions. |
| Wednesday 11.11.20 4- 13A 2-13B | Lesson Objective: Physical properties of aldehydes and ketones Success Criteria: students will be able to: -understand that aldehydes and ketones have permanent dipoles. | Teacher uses power point presentation that contains interactive |

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| Mode of Teaching – Zoom | <p>-Ketones do not form intermolecular hydrogen bonds and this affects their physical properties</p> <p>-aldehydes can form hydrogen bonds with water and this affects their solubility Show the polarity of the carbonyl group.</p> <p>-Predict the physical properties of aldehydes and ketones: their solubility & boiling points – compare to alcohols/alkanes of similar size.</p> | <p>questions that helps to predict the physical properties of aldehydes and ketones.</p> <p>Students solve the worksheet file questions.</p> |
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Homework : Solve worksheet file questions and text book questions page 177.

YEAR 13 A/B– CHEMISTRY

WEEK 11 (8th Nov to 12th 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 | |
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| 8.11.20 Sunday 4 13A 5 13B Mode of Teaching – Zoom | <p>Learning Objective:</p> <ol style="list-style-type: none"> 1. understand the terms: <ol style="list-style-type: none"> i rate of reaction ii rate equation iii order with respect to a substance in a rate equation iv overall order of reaction v rate constant vi half-life vii rate-determining step viii activation energy ix heterogenous and homogenous catalyst 2.to determine and use rate equations of the form: $rate = k[A]^m[B]^n$, where m and n are 0, 1 or 2 <p>Learning Outcome:</p> <p>Explain and use the terms: rate of reaction, rate equation, order and rate constant, activation energy</p> <p>Explain and use the term: half life and rate determining step;</p> <p>Explain with example homogeneous catalyst: I^- and $S_2O_8^{2-}$ and heterogeneous catalyst: Fe in Haber process.</p> <p>Write the rate equation for a given reaction.</p> | <p>Teacher uses PowerPoint presentation and video or animation to demonstrate any reaction to explain the different terms.</p> <p>Teacher uses worksheet that contains interactive questions, to solve the questions on rate of reaction, rate equation, order and rate constant, activation energy.</p> |

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| <p>8.11.20 Sunday 8 13B</p> <p>11.11.2020 Wednesday 5 13A</p> <p>Mode of Teaching – Zoom</p> | <p>Learning Objective: Determine and use rate equations of the form: rate = $k[A]^m[B]^n$, where m and n are 0, 1 or 2</p> <p>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.</p> | <p>Teacher uses textbook questions and power point to introduce the concept of rate equations.</p> <p>Students write rate equations for different reactions and discuss for the whole class.</p> |
| <p>10.11.20 Tuesday 1 13B</p> <p>11.11.2020 Wednesday 6 13A</p> <p>Mode of Teaching – Zoom</p> | <p>Learning Objective: 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 <i>A 'clock reaction' is an acceptable approximation of this method</i></p> <p>Learning Outcome: Pupils vary concentration of $\text{Na}_2\text{S}_2\text{O}_3$ and time how long it takes for sulphur precipitate to form – S clock</p> <p>Also use iodine clock method</p> <p>Predict from a concentration-time graph, the rate of a reaction</p> | <p>Question from textbook and worksheet are given to solve.</p> <p>Discuss the answers for the whole class.</p> |

HOMEWORK: Solve textbook question page 147