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| **School of Pedagogical Sciences (SPS)**  **M.G University Kottayam as a part of Ph. D Programme**  Research Scholar  **: Shanavas K.E**  Supervising Teacher **: Dr Sajna Jaleel Professor SPS** | | | | |
| **Action Script : E Content Lesson based on CDM 2**  Name of Teacher**:** Shanavas K.E Standard: XI Science  Subject: Chemistry Strength: 59  Topic: Kossel Lewis approach to chemical bonding Time: 6 minutes Chapter: Chemical Bonding and Molecular structure | | | | |
| Audio | Video | | Tg-Ig Activities | Phases of CDM |
| Dear Students,  Welcome to the world of chemistry. Chapter 4 Chemical bonding and molecular structure. This is the E-content lesson based on CDM 2.  Today I focus upon Kossel Lewis approach to chemical bonding.  In this lesson, we can easy to study Lewis representation of simple molecules and polyatomic molecules.  What are Lewis symbols and its significance?  Write the Lewis symbols of first and second period elements | Teacher presents  Slide  Definition of Lewis symbols Lewis introduced simple notations to represent valence electrons in an atom These notations are called Lewis symbols.  Slide | | Gaining the attention to the objectives  Presentation of slides  Asking questions  Developing the content | Establishes rapport with the students  **Phase I**  Confrontation with stage relevant task  Insisting to think |
| Can you write the Lewis structure of Methane using dots and cross symbols?  How NaCl formed from Na and Cl ?  See the Lewis structure of NaCl  Sodium atom transfer its valence electron and Cl gain its electron to complete the octet and attain stability.  What is Electrovalency of an atom?  What is the Electrovalency of Na and Cl in NaCl?  Can you give Lewis representation of simple molecules Cl2, O2 and N2  How many bond pair of electrons in Cl2 molecule?  What is bond pair?  Can you define bond pair?  What is lone pair?  Can you define lone pair?  What is Covalency?  What is Covalency of Chlorine?  See Lewis structure of O2, N2  Covalency of O2 is 2  Covalency of N2 is 3  Calculate the number of unshared electrons (U) in the Lewis structures by using the relation?  Calculate the number of unshared electrons (LP) of **CO, CO32-, NH4+**  Lewis structure of CO32-, NH4+  **Time gap online assignment**  Give the Lewis structure of polyatomic ion NO32-  Enjoy and learn chemistry in a simple way. | | Slide  The number of electrons lost or gained by an atom represent the electrovalency of the atom.  The Electrovalency of Na is +1 and Cl is -1    Slide  One bond pair. Two electrons represent a single bond.  Slide    The number of electrons its atom contributes for sharing while forming covalent bond  Covalency of Chlorine is 1          **U = V – S**  Where S is shared electron (BP). Vis Valence electron.            **Thank you**  **Learn well** | Audio-Video input entering into the content  Audio-Video Input giving pictorial representation of symbols of sigma and pi molecular orbitals  Presentation of slides  Audio –video input  Audio-video input giving more applications and problems  Asking questions  Audio- video input  Presentation of slides  Evaluating and assessing the content  Audio-video input giving more applications  Audio-video input  Assessing the content with more applications and diagram  Audio-video input giving more problems | Elicits Students responses.  Giving perceptual cues or hints.  **Phase II**  Inquiry  Elicits students’ responses    Seeks justification  Probes justification results in assimilation  Offer counter suggestions  Insisting to think  Probes reasoning  **Phase III**  Transfer  Insisting to think  Elicits students’ responses  Seeks justification results in assimilation and then accommodation  Seeks and probe reasoning  Offer counter suggestion results in assimilation and then accommodation  Probes reasoning of new experience results in assimilation and accommodation  Seeks reasoning and justifications. |