



Chemistry Assignment

- **How does an electron rotate in a fixed orbit?**

ANS: Electrons do not rotate like small planets do. According to Bohr's theory, electrons travel around the nucleus in fixed circular orbits. While in these specific orbits, an electron does not radiate (or lose) energy. When several orbitals of equal energy (degenerate orbitals) are available, electrons prefer to occupy separate orbitals rather than getting paired in the same orbital.

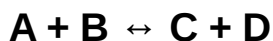
- **What did you learn from atomic structure chapter?**

ANS: In atomic structure chapter I have learnt about Atomic particles, atomic number, mass number, atomic orbitals, isotopes, electronic configurations of atoms, Pauli exclusion principle, Hund's rule, Aufbau principles atomic models, periodic table and periodic properties of elements, semiconductor, photoelectric effect, electromagnetic radiation.

From this chapter, I can use principles of atomic structure to design materials with specific properties, such as strength, conductivity, and heat resistance.

- **What is chemical equilibrium? In chemical equilibrium, does the reaction continue? How can you prove your answer?**

ANS: A reaction which can go in the forward and backward direction simultaneously is called chemical equilibrium.



In a chemical equilibrium, The concentrations of reactants and products remain constant over time. It might seem like the reaction has stopped because the

concentrations are not changing. But it's just the reversible reaction occurring at the same speed. This creates a kind of balance where nothing overall is changing.

I can prove this If I add more of something or take some away, the system will adjust to return things to their initial state, showing that the reactions continue even though the amounts remain constant.

- **How will this course benefit you in your field?**

ANS: The course -(CHE109) Engineering chemistry gives a basic knowledge of atoms and molecules, the concept of chemical bonding, and the structure of a molecule. It introduces the mole concept and ideas of solution concentrations, acid-base titration, and how structure relates to bonding and bulk properties. The course also treats phases and solution behavior, equilibrium and thermodynamics, electrochemistry, and the basics of biochemistry.

In my field, It will make me understand the fundamentals and application of current chemical theories, Moreover, it will help to apply knowledge in problem-solving, critical thinking and analytical reasoning. I will also be able to design and carry out experiments and accurately record and analyze the results of such experiments.