# Chemistry - 11th Class Chemistry Short Questions Chapter 11 Preparation

Q1. State rate of chemical reaction and give its units?

**Ans 1:** The rate of reaction is defined as the change in concentration of reactant or a product divided by the time taken for the change.
The rate of reaction has the units of concentration divided by time,Usually the concentration is expressed in mole $dm^{-3}$ And the time in second, thus the units for the reaction rates are moles $dm_{-3}s^{-1}$.

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Q2. How higher temperature increase the rate of reaction?

**Ans 1:** When we increase the temperature the average energy of the molecules increases. The number of those molecules also increase which can form an activated complex after collision.So by increasing temperature, number of effective collision increased and rate of reaction also increases.

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Q3. Define instantaneous and average rate of reaction?

**Ans 1:** Instantaneous Rate of Reaction: The rate at any one instant during a specific interval of time is called instantaneous rate of reaction.
Average Rate of Reaction: The rate of reaction between two specific intervals of time is called average rate of reaction.

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Q4. Compare order of reaction and molecularity?

**Ans 1:** Orde:

1. The number of molecules whose concentration change in a chemical reaction.
2. It is an experimental quantity.
3. It may be fractional.
4. It may be zero.

**Ans 2:** Molecularity:

1. The number of molecules involved in a chemical reaction.
2. It is a theoretical quantity.
3. It always whole number.
4. It is never zero.

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Q5. The radioactive decay is always first order reaction.Explain?

**Ans 1:** The rate of radioactive decay depends on the amount of radioactive substance.Since only of substance is involved in this process therefore it is always a first order reaction.

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Q6. Give two characteristics of enzyme catalyst?

**Ans 1:** There are following characteristics of an enzyme.

1. Enzymes catalysis is highly specific.
2. Rate of enzymatic reaction is maximum at optimum temperature and pH.
3. Enzymatic activities are enhanced by the presence of an activator.

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Q7. Define catalysis.Name its two types?

**Ans 1:** The process which take place in the presence of a catalyst is called catalysis.
There are two types of it.

1. Homogeneous catalysis
2. Heterogeneous catalysis

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Q8. Discuss auto catalyst with example?

**Ans 1:**

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Q9. Define negative catalyst along with an example?

**Ans 1:** A substance which decreases the rate of reaction is called negative catalyst or inhibitor.
E.g.Tetraethyl is added to petrol because it control pre-ignition of petrol.

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Q10. A final divided catalyst may prove more effective why?

**Ans 1:** When a catalyst is finely divided, it has greater surface areas and possibilities of atoms and molecules of reactants to come in contact with each other increase and rate exchange.
E.g. $CaCO_3$ Reacts much more rapidly in powder form, as compared to its big pieces.

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