

Unit 10. Pre-Class Quiz Questions

1. An active site is
 - a. a location within a reactor where the reaction rate is increased
 - b. another name for the surface area of a catalyst
 - c. the part of a very large molecule where the reaction occurs
 - d. a specific location on the surface of a heterogeneous catalyst where species adsorb and react
 - e. a specific location on the surface of a heterogeneous catalyst where species can desorb, but they cannot adsorb
2. Adsorption can be described as
 - a. the formation of a complex between an active site on a catalyst surface and a fluid phase species
 - b. the breaking of a bond holding a species to a site on the surface of a catalyst
 - c. dissolution of a fluid phase species into the bulk of a solid catalyst
 - d. the reaction between two species that are each bonded to active sites on a solid catalyst
 - e. the act of clicking on an advertisement that appears on a web page
3. True or false, rate expressions for surface reactions typically use the fractional coverage of the surface by the species, θ_i , as the composition variable for surface species.
4. True or false, masi stands for multiple adsorption site interaction
5. True or false, for heterogeneous catalysts, the conservation of catalyst is expressed using the following equation:

$$\theta_{vacant} + \sum_{\substack{i = \text{all} \\ \text{adsorbed} \\ \text{species}}} \theta_i = 1$$