



Chemistry Entrance Exam Guidelines

Description

This exam is designed for the students willing to enroll in the faculty of public health and in the faculty of sciences at Jinan University. If the applicant passes the exam with at least 60% they can directly register the General Chemistry course required for their first year of study. If they fail the exam, they should register the Remedial Chemistry course to help them develop the fundamental concepts from the most elementary ideas of chemistry.

Contents

1. Gases

Ideal gas law
Mixture of gases
Partial and total pressure
Mole fraction
Average molar mass
Relative density

2. Kinetic

Graph representation
Rates: instantaneous, average and initial.
Half life of the reaction
Kinetic factors

3. Chemical Equilibrium

Table of variation
Constants of equilibrium: K_p , K_c , α and the yield
Le Chatelier principles

4. Acid-Base Reactions in Aqueous Solution

Strong acid, strong base, pH-metric titration
Weak acid, weak base, conjugate acid/base pair
Acid-base reaction
Titration
Buffer solution

5. Organic Chemistry

Functional groups
Alcohols
Aldehydes and ketones
Carboxylic acids and their derivatives
Amines and α -amino acids
Aspirin and Panadol
Soap