

University of Baghdad
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Graduate Studies
Ph.D.
Competitive examination
Subject: physical chemistry

Explain the following using suitable equations and relations:

- 1-Quantum yield. 2- Joblonski diagram in photo chemistry.
- 3-Ionic strength for 0.1 M KCl solution. 4-Saturated Calomel electrode reaction.
- 5-Specific conductivity of solution. 6-What is the maximum number of phases that can be in equilibrium in one, two and three- component system.
- 7- Reaction temperature dependence followed Arrhenius equation and the effect of catalysis.
- 8-The energy spacing between vibrational energy levels for hydrogen.
- 9-The rate equation for first, second and 0.5 orders reaction, what is the rate constant units.
- 10- The different between; isothermal and adiabatic process, which one give higher work value.