

**Fiziki və kolloid kimya kafedrası**  
**2020-2021-ci tədris ili qış imtahan sessiyasının sualları**  
Questions

(Physical chemistry-2)

1. Heterogeneous phase equilibrium
2. Main concepts of phase equilibria. Gibbs Phase rule
3. Phase rule for one-component systems
4. The phase diagram of water
5. The phase diagram of sulphur
6. Phase diagrams of two-component systems
7. The phase diagram of Bi-Cd
8. Systems having congruent melting point
9. Incongruent melting point system
10. First ordered irreversible reactions
11. Second ordered irreversible reactions
12. Chemical kinetics. Main concepts
13. Chemical kinetics. Order and Molecularity
14. Arrhenius equation
15. Temperature dependence of the rate
16. Collision theory. "P" factor
17. Transition – state theory
18. Complex reactions. Consecutive reactions
19. First order reversible reactions
20. Second order reversible reactions.
21. Parallel reactions
22. Chain reactions
23. Linear chain reactions
24. Branched chain reactions
25. Explosions and branched chain reactions
26. Photochemical reactions. Quantum yield
27. Homogeneous catalysis
28. Heterogeneous catalysis
29. Chemical kinetics of heterogeneous catalysis
30. Theories of heterogeneous catalysis. The multiplet theory of Balandin
31. An active ensembles theory of Kobozev
32. Electron theory of catalysis
33. Autocatalytic reactions
34. Acid-base catalysis
35. Enzyme reactions – the Michaelis-Menten mechanism
36. Characteristic features of heterogeneous catalysis
37. Kinetics of heterogeneous catalytic reactions
38. Brief information about electrochemistry
39. Various types of conductors
40. Electrolytes and ions
41. Nernst equation
42. Activity. Activity coefficient
43. Electroneutrality and mean quantities

44. Electrochemical cells.
45. The EMF of galvanic cells
46. Classification of electrodes
47. The standard electrode potentials.
48. Oxidation – reduction electrodes