Colloid chemistry from science final control questions . Option number 1

1. mission , purpose , development of science history \_
2. Gels and ribs \_ Thixotropy event \_
3. Silver bromide sol 32 cm 3 8∙10 -3 n potassium bromide and25 cm 3 is formed by mixing 9.6∙10 -3 n silver nitrate. Write the micellar formula of sol. Determine the sign of the particle's charge and the direction of motion in the electric field.

Colloid chemistry from science final control questions . Option number 2

1. Disperse systems and their classification .
2. Concentrated dispersed systems .
3. AgNO 3 write the formulas of micelles of AgJ sol in excess and Fe(OH) 3 sol in excess of FeCl 3 and determine the signs of particle charge.

Colloid Chemistry Final Review Questions. Option number 3

1. Level events , their classification .
2. Disperse of systems rheological properties . Viscosity .
3. Write the formulas of micelles of Al(OH) 3 sol when AlCl 3 is obtained in excess and SiO 2 sol when H 2 SiO 3 is a stabilizer. How are the particles of sol charged?

Colloid chemistry from science final control questions . Option number 4

1. Surface tension concept .
2. Rheology main concept and laws .
3. KAuO 2 , and As 2 S 3 stabilized with H 2 S write the formulas of micelles of sol. What are the charge signals of the batteries?

Colloid chemistry from science final control questions . Option number 5

1. Hard the body surface liquid with getting wet , getting wet foreign corner \_
2. High molecular of compounds melting \_ Dumb person level \_
3. Write the structure of barium sulfate micelles obtained as a result of the reaction of barium chloride with excess Na 2 SO 4 . BaCl 2 + Na 2 SO 4 = [BaSO 4 ] + 2NaCl

Colloid chemistry from science final control questions . Option number 6

1. Getting wet of the process heat effect \_
2. High molecular compounds ( YUMB ).
3. ZnSO 4 + (NH 4 ) 2 S = [ZnS] + (NH 4 ) 2 SO 4 of zinc sulfide sol micelles obtained by reaction :

a) ZnSO 4 when the excess is received;

b ) Write the formula when (NH 4 ) 2 C is taken in excess.

Colloid chemistry from science final control questions . Option number 7

1. Adhesion and cohesion . Capillary pressure \_
2. Hydrophilic-lipophilic balance \_
3. 3 0.001n potassium iodide was added to 30 cm 3 0.2% silver nitrate solution . Write the formula of the resulting sol micelles. Determine the direction of motion of the particle in the electric field. The density of silver nitrate solution is 1.

Colloid chemistry from science final control questions . Option number 8

1. Hard the body on the surface gases and liquid of steam adsorption .
2. Microheterogeneous dispersed systems : foams , suspensions , aerosols , emulsions , powders \_ and their common description .
3. A small amount of hydrochloric acid was added to the freshly precipitated aluminum hydroxide precipitate. In this, Al(OH) 3 sol was formed. Write the formula for sol micelles. Note that the colloidal particle moves toward the cathode.

Colloid chemistry from science final control questions . Option # 9

1. Sedimentation , colloid of solutions osmotic pressure .
2. DLFO theory of stability .
3. Calculate the value of the electrokinetic potential of KCl at the boundary of the ceramic membrane with an aqueous solution. The solution was passed through the membrane under a pressure of R=42·10 -3 Pa. Discharge potential E=8.0·10 -2 V, specific electrical conductivity of the medium Om -1 m -1 , viscosity =10 -3 N·s/m 2 , dielectric constant 81, electrical constant =8.85· 10-12 f /m.

Colloid Chemistry Final Review Questions. Option No. 10

1. Colloid in solutions light \_ of light spreading \_ Tyndall- Faraday effect \_
2. Hydrophobic of the halls stability types .
3. electrokinetic potential value is x =48.8∙10 -3 V, calculate the electrophoresis rate of clay particles. The potential value between the electrodes is 220 V, the distance is 44∙10 - 2 m, the viscosity of the medium is η = 10 -3 N∙s/m 2 , the dielectric constant is 81, the electric constant is 8.85∙10 -12 f/m.

Colloid Chemistry Final Review Questions. Option No. 11

1. Polyani's polymolecular adsorption theory .
2. Ionogenic surface active substances and them technological in processes application .
3. BaSO 4 sol was obtained by adding the same volume of barium nitrate and sulfuric acid. If the particle moves towards the anode in an electric field, are the initial concentrations of the solutions equal? Write the formula for micelles of sol.

Colloid chemistry from science final control questions . Option No. 12

1. BET theory .
2. Surface active of substances types .
3. In an aqueous solution of red Congo dye, when the concentration gradient is 0.6 kg/m 3 20∙ 10 - substance passes through the 4 m2surface in 1.5 hours 3.6∙10 - 7 kgsubstance. Calculate the diffusion coefficient.

Colloid chemistry from science final control questions . Option No. 13

1. Colloid solutions cleaning methods : dialysis , electrodialysis , ultrafiltration , ultracentrifugation .
2. Coagulation. Factors causing the coagulation phenomenon.
3. field potential gradient is 980 V/m 2 , zeta potential =8.0·10 -3 V. The viscosity of the medium is 1.14·10 -3 N·s/m 2 , the electric constant is 8.85·10 -12 f/m.

Colloid chemistry from science final control questions . Option No. 14

1. Liquid on the surface adsorption . The Gibbs equation .
2. Surface active of substances common description .
3. Calculate the radius of the particle if the diffusion coefficient is 1.6∙10 -10 m 2 /s and the viscosity of the medium is N•s/m 2 at 298K .

Colloid Chemistry Final Review Questions. Option No. 15

1. Duclos-Traube the rule . Ions adsorption .
2. Coagulation DLFO theory about .
3. Radius of iron (III) hydroxide hydrosol particles r=2∙10 -8 m, medium viscosity If N·s/m 2 , determine the average displacement distance of the particle in s.

Colloid Chemistry Final Review Questions. Option No. 16

1. Hard substance on the surface from solutions to be adsorption . Ionites .
2. Schulze-Gardy the rule . Zol's coagulation limit and him to determine
3. hydrosol with concentration S=3 kg/m 3 , particle diameter m and density 19.3 kg/m 3 at 298K.

Colloid Chemistry Final Review Questions. Option No. 17

1. Colloid systems to get dispersion , condensation methods .
2. Coagulation speed \_ Coagulation acceleration methods .
3. Calculate the electrokinetic potential of arsenic (III) sulfide hydrosol particles. In the electrophoresis method Within 200s, the zol limit was pushed to 6.0·10 - 2 m. The gradient of the external field N=8.0·10 2 N·s/m 2 , the viscosity of the medium =10 -3 N·s/m 2 , dielectric constant 81, electrical constant = 8.85·10 -12 f/m.

Colloid Chemistry Final Review Questions. Option No. 18

1. Adsorption forces nature \_ of Freundlich adsorption isotherm .
2. Without water in solutions micelle harvest to be Solubilization .
3. Sulfur salt is obtained by adding a solution of 5 cm 3 of sulfur in water to 20 cm 3 of water. By what method is Zol obtained?

Colloid chemistry from science final control questions . Option No. 19

1. Colloid of particles diffusion , Brownian motion .
2. Burning the pressure surface coming \_
3. The following results were obtained during the electroosmosis process: current strength J=3·10 - 3 A, 2.0·10 - 8 m3volume of solution moves in s . Relative electrical conductivity of the environment is Om -1 m -1 , viscosity =10 -3 N·s/m 2 , dielectric constant 81, electrical constant 0 =8.85·10 -12 f/m. Calculate the -zeta potential at the interface of an aqueous solution of quartz– KCl .

Colloid Chemistry Final Review Questions. Option No. 20

1. Colloid of systems color \_
2. Hydrophobic of the halls aggregative and kinetic stability reasons .
3. If the zeta potential value is x =89.5∙10 -3 V, the potential between the electrodes is 240 V, and the distance between the electrodes is 20∙10 - 2 m, calculate the electrophoresis speed of arsenic(III) sulfide hydrosol particles. The viscosity of the medium is η = 10 -3 N∙s/m 2 , the dielectric constant is 81, the electrical constant is 8.85∙10 -12 f/m.

Colloid Chemistry Final Review Questions. Option No. 21

1. of Langmuir monomolecular adsorption theory .
2. Colloids association , micelle . Micellar harvest to do critical concentration .
3. How many volumes of 0.029% sodium chloride and 0.001n silver nitrate solutions should be taken to form a silver chloride sol? Assume that the density of the sodium chloride solution is 1 ha.

Colloid chemistry from science final control questions . Option No. 22

1. Sorption , adsorption and absorption , chemosorption , capillary condensation processes .
2. Emulsions taken and stability . Emulsifiers and their classification .
3. 3 of 0.015n potassium iodide solution to form a positively charged particle ? Write the formula for the micelle.

Colloid chemistry from science final control questions . Option No. 23

1. Disperse systems analysis to do optical methods : ultramicroscope , electron microscope .
2. Colloid of solutions electricity permeability .
3. If the electrokinetic potential value of iron hydroxide hydrosol particles is x =52.5∙10 -3 V, and the electrophoresis speed is 3.7∙10 -6 m/s, calculate the voltage between the electrodes. The viscosity of the medium is η =1.005∙10 -3 N∙s/m 2 , the dielectric constant is 81, the electrical constant is 8.85∙10 -12 f/m.

Colloid Chemistry Final Review Questions. Option No. 24

1. Radiography and electronography .
2. Micellar of nuclei structure about thoughts \_
3. Silver chloride sol was obtained by mixing equal volumes of 0,0095 Mpotassium chloride and 0.012 N silver nitrate solutions. For this sol, which electrolyte has the largest coagulation threshold from K 3 [Fe(CN) 6 ], K 4 [Fe(CN) 6 ] and MgSO 4 solutions.

Colloid Chemistry Final Review Questions. Option No. 25

1. Electrophoresis and electroosmosis events .
2. Micellar . Micellar solution . Aggregate , core , potential harvest the conducting ion and against ions .
3. 50·10 - 6 m3iron (III) hydroxide solution was poured into three flasks. To coagulate the soil, add KCl with a concentration of 5.3·10 - 6 m31 kmol/m 3 to the first flask, Na 2 SO 4 with a concentration of 31.5·10 - 6 m35.0·10 -3 kmol/m 3 to the second flask, and 18.7 to the third flask 10 - 6 m33.3 10 -4 kmol/m 3 Na 3 PO 4 solution was poured. Determine the coagulation threshold and sol particle charge for each electrolyte.

Colloid Chemistry Final Review Questions. Option No. 26

1. flow exit and drowning potentials .
2. Helmholtz-Perrin , Guy-Chapman and Stern theories .
3. Coagulation threshold for 10 -3 m 3 As 2 S 3 sol of Al 2 (SO 4 ) 3 solution with a concentration of 0.01 kmol/m 3 kmol/m 3 . How much Al 2 (SO 4 ) 3 solution should be added for open coagulation to occur ?

Colloid chemistry from science final control questions . Option No. 27

1. Electrophoresis using dzeta potential to determine
2. electric layer ( QEQ ) structure.
3. - 7 m3barium nitrate solution was used for coagulation of 18∙10 - silver iodide sol. 6 m3The concentration of the electrolyte solution is 0.05 kmol/m 3 . Calculate the coagulation limit of Zol.

Colloid chemistry from science final control questions . Option No. 28

1. mission , purpose , development of science history \_
2. electric layer ( QEQ ) structure.
3. When coagulating arsenic sulfide sol, instead of sodium chloride solution (10∙10 - 6 m3sol requires 1.2∙10 - 6 m3sodium chloride solution), 0.036 kmol/m 3 magnesium chloride ( 0.1∙10 - per 10∙10 6 m3- sol)6 m3 sodium chloride solution) solution and 0.01 kmol/m 3 aluminum chloride solution (10∙10 - 6 m3sol requires 0.1∙10 - 6 m3sodium chloride solution) solution, how many times will the coagulation limit of the sol decrease?

Colloid Chemistry Final Review Questions. Option No. 29

1. Disperse systems and their classification .
2. Helmholtz-Perrin , Guy-Chapman and Stern theories .
3. The micelles of the HF dispersant are spherical, and their diffusion coefficient in water is 1.0∙10 -10 m 2 /s. Density of substance r=1.44∙10 -3 kg/m 3 , temperature 293K, viscosity of medium N∙s/m 2 .

Colloid Chemistry Final Review Questions. Option No. 30

1. Level events , their classification .
2. Micellar . Micellar solution . Aggregate , core , potential harvest the conducting ion and against ions .
3. The volume of the liquid flowing through the capillary is 1∙10 –5 m 3 length of the capillary 0,2 m. A liquid with a viscosity of 10 –3 N∙s/m 3 flows under the influence of its own weight. If the height of the liquid column is 10 3 kg/m 3 0,27 mand the density is 10 3 kg/m 3 , calculate the radius of the capillary through which the liquid flows.

Colloid Chemistry Final Review Questions. Option No. 31

1. Hard the body surface liquid with wetting , wetting foreign corner \_
2. Colloid of solutions electricity permeability .
3. 2,1 gwhen grinding silver:

in the form of a cube with an edge length of m;

b ) If spherical particles with a radius of 10 - are formed, calculate the total surface of the particles.8 m The density of silver is 10.5∙10 3 kg / m 3 .

Colloid chemistry from science final control questions . Option No. 32

1. Getting wet of the process heat effect \_
2. Hydrophobic of the halls stability types .
3. Quartz suspension particles are spherical. 40% of the mass of particles are particles with a radius of 1∙10 - 5 mand the rest are particles with a radius of 5∙10 - 5 m. Calculate the specific surface area of quartz.

Colloid chemistry from science final control questions . Option No. 33

1. Adhesion and cohesion . Capillary pressure \_
2. Hydrophobic of the halls aggregative and kinetic stability reasons .
3. How many times will the free energy of the system change if the radius of the suspension particles increases by 5∙10 ?5 m

Colloid chemistry from science final control questions . Option No. 34

1. Sorption , adsorption and absorption , chemosorption , capillary condensation processes .
2. DLFO theory of stability .
3. The constants of the Shishkovsky equation are equal to Calculate the surface tension of a 0.05 kmol/m 3 solution of butyric acid at 273K. Surface tension of water at this temperature

Colloid chemistry from science final control questions . Option No. 35

1. Surface tension concept .
2. Micellar of nuclei structure about thoughts \_
3. Calculate the relative surface area of arsenic sulphide sol with average particle diameter of 1∙10 - 7 m, density r=3.43∙10 3 kg/m 3 .

Colloid chemistry from science final control questions . Option No. 36

1. Hard the body on the surface gases and liquid of vapors adsorption .
2. Burning the pressure surface coming \_
3. a 0.5 kmol/m 3 solution of propionic acid, calculate the adsorption of the solution at the air boundary at 273K. The Shishkovsky equation constants and .

Colloid chemistry from science final control questions . Option No. 37

1. Adsorption forces nature \_ of Freundlich adsorption isotherm .
2. Coagulation. Factors causing the coagulation phenomenon.
3. of 20% caustic sodium solution at 20 0 C is 85.8∙10 -3 n/m, density is 1.219 g/cm 3 . Determine the adsorption value and sign of the acid. At this temperature, the surface tension of water is 72.75∙10 -3 n/m.

Colloid chemistry from science final control questions . Option No. 38

1. of Langmuir monomolecular adsorption theory .
2. Coagulation speed \_ Coagulation acceleration methods .
3. Calculate the specific gravity of the kaolin suspension. Density of kaolin r=2.5∙10 3 kg/m 3 average radius of particles 8∙10 - 7 m. Assume that the suspension is monodisperse.

Colloid Chemistry Final Review Questions. Option No. 39

1. Polyani's polymolecular adsorption theory .
2. Schulze-Gardy the rule . Zol's coagulation limit and him to determine
3. Calculate the relative level of particles :

a) the length of the edges of the cube is 1∙10 - 6 m;

b ) sphere diameter 1∙10 -6 m;

Colloid chemistry from science final control questions . Option No. 40

1. Liquid on the surface adsorption . The Gibbs equation .
2. Coagulation DLFO theory about .
3. was crushed into cube-shaped particles with an edge length of 5∙10 - . If the 9 mdensity of gold is 19.3∙10 3 kg/m 3 , calculate the total level.

Colloid chemistry from science final control questions . Option No. 41

1. Duclos-Traube the rule . Ions adsorption .
2. Surface active of substances common description .
3. is composed of spherical particles with a diameter of 6∙10 - 8 m. Calculate the total surface of particles formed from 0.5 cm 3 of mercury.

Colloid chemistry from science final control questions . Option No. 42

1. Hard substance on the surface from solutions to be adsorption . Ionites .
2. Surface active of substances types .
3. If the particles of silver sol are in the form of a cube with an edge length of 4∙10 - 6 mand a density of 10.5∙10 3 kg/m 3 :

a) 0,1 kghow many particles are formed from silver;

b ) calculate the total level of particles.

Colloid chemistry from science final control questions . Option No. 43

1. Colloid systems to get dispersion , condensation methods .
2. Ionogenic surface active substances and them technological in processes application .
3. The diameter of mercury sol particles is 6∙10 -6 cm, density is 13,546 g/cm 3 .

a) Total level of particles;

b ) Calculate the number of particles formed from 1g of mercury.

Colloid chemistry from science final control questions . Option No. 44

1. BET theory .
2. Colloid of particles diffusion , Brownian motion .
3. Crushed 2g platinum particles are in the shape of a cube, the edges of which are 1∙10 - 3 m3. If the density of platinum is 21.4 g/cm 3 , calculate the total surface.

Colloid chemistry from science final control questions . Option No. 45

1. Colloid solutions cleaning methods : dialysis , electrodialysis , ultrafiltration , ultracentrifugation .
2. Colloids association , micelle . Micellar harvest to do critical concentration .
3. If silver particles with an edge length of 0.5 cm are crushed into cube-shaped particles with an edge length of 5∙10 -8 cm, how many times will the level of the particles increase? The density of silver is 10.5 g/cm 3

Colloid chemistry from science final control questions . Option No. 46

1. Colloid of systems color \_
2. Microheterogeneous dispersed systems : foams , suspensions , aerosols , emulsions , powders and their common description .
3. Particle radius in peptization of Fe(OH) 3 gel If 2∙10 -6 decreases to 4∙10 - , how many times will the excess surface energy of the system increase?9 m

Colloid chemistry from science final control questions . Option No. 47

1. Colloid in solutions light of light spreading \_ Tyndall- Faraday effect \_
2. Emulsions taken and stability . Emulsifiers and their classification .
3. Silver iodide sol was obtained by adding 40 cm 3 0.001n potassium iodide to 30 cm 3 0.2% silver nitrate solution . Write the formula of the resulting sol micelles. Determine the direction of motion of the particle in the electric field. The density of silver nitrate solution is 1.

Colloid chemistry from science final control questions . Option No. 48

1. Disperse systems analysis to do optical methods : ultramicroscope , electron microscope .
2. Hydrophilic-lipophilic balance \_
3. 3 of 0.015n potassium iodide solution to form a positively charged particle ? Write the formula for the micelle.

Colloid chemistry from science final control questions . Option No. 49

1. Electrophoresis and electroosmosis events .
2. High molecular of compounds melting \_ Stuttering level \_
3. A small amount of hydrochloric acid was added to the freshly precipitated aluminum hydroxide precipitate. In this, Al(OH) 3 sol was formed. Write the formula for sol micelles. Note that the colloidal particle moves toward the cathode.

Colloid chemistry from science final control questions . Option No. 50

1. flow exit and drowning potentials .
2. Rheology main concept and laws .
3. Sulfur salt is obtained by adding a solution of 5 cm 3 of sulfur in water to 20 cm 3 of water. By what method is Zol obtained?

Colloid chemistry from science final control questions . Option No. 51

1. Electrophoresis using dzeta potential to determine
2. Disperse of systems rheological properties . Viscosity .
3. How many volumes of 0.029% sodium chloride and 0.001n silver nitrate solutions should be taken to form a silver chloride sol? Assume that the density of the sodium chloride solution is 1 ha.

Colloid chemistry from science final control questions . Option No. 52

1. Sedimentation , colloid of solutions osmotic pressure .
2. Without water in solutions micelle harvest to be Solubilization .
3. to 6 m1∙10 at 3 m288K , how many times will the value of free surface energy decrease?