Demonstration variant

1. What electronic configuration has the element №17? Compose the higher oxide of this element and indicate its nature (acidic, basic, amphoteric)
2. Select strong acids among the listed substances and write down their formulas: Nitric, hydrogen sulfide, sulfuric, acetic, metaphosphoric
3. Calculate total number of moles of ions, present in 1 L 0,05M $FeCl_3$ and in 1 L 0,02 M H_2SO_3. Write the dissociation equations. Dissociation degree of weak electrolyte $\alpha = 0,01$
4. How much (g) water should be added to 200 g of 30% aqueous HCl to obtain 5% solution?
5. Among the listed salts $Ba(NO_3)_2$, $ZnCl_2$, Na_2CO_3, $Al_2(SO_4)_3$, K_2S, $CuSO_4$, choose those that are hydrolyzed by cation in aqueous solutions. Write the molecular and ionic equations for the hydrolysis of these substances
6. Equalize the equation using electronic balance, note the oxidizer and reductant Write the reaction equation in molecular and ionic form
   $KMnO_4 + HBr \rightarrow$
7. Indicate the properties of the given oxides (acidic, amphoteric, basic, non-salt-forming). Illustrate their properties with several reactions, write equations in molecular and ionic form. Oxides: Na_2O, Al_2O_3, N_2O_5
8. Draw up the structural formulas of all possible isomers of a substance with a gross formula $C_4H_{10}O$. Name substances and mark their classes.
9. During the combustion of 1.8 g of primary amine, 0.448 l of nitrogen was released. Determine the molecular formula of this amine.
10. Determine monovalent metal, 15,6 g of which react with water with evolution of 4,48 L of a gas (normal conditions).