1- What is the effect of ammonium hydroxide addition to the ferric salt solution? Explain with equations?

2- What is the chemical formula of precipitated and salt iron?

3- A sample of is magnetite, not pure Fe$_3$O$_4$ weighed 0.5g converted chemically reaction to the ferric oxide weight 0.41g What is the percentage of Fe$_3$O$_4$ in the magnetite?

4- What is the purpose of concentrated HNO$_3$ addition the produced solution from the added of HCl to ferric salt?