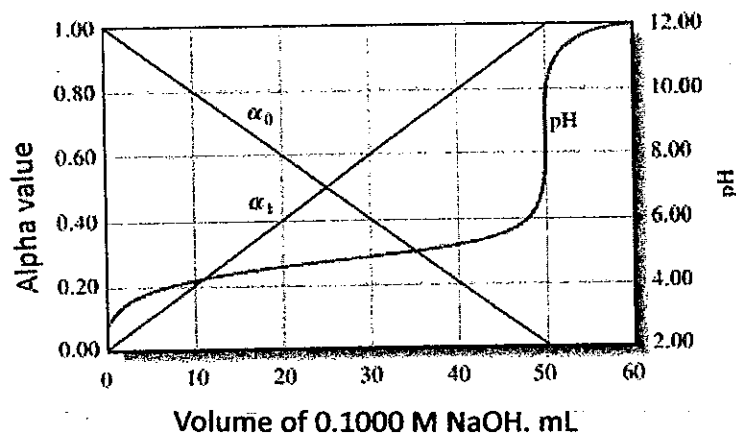


※ 注意：請於試卷內之「非選擇題作答區」作答，並應註明作答之題號。

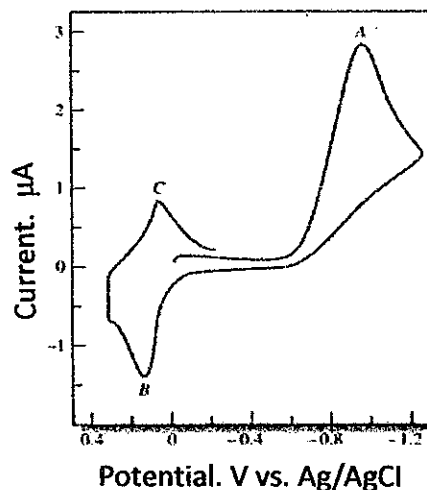
Analytical Chemistry

(Please write down your answer in detail)

1. Please define what is "Q test" in statistics. (10%)
2. The Debye-Hückel Equation is an important tool for activity calculation. Please define. (10%)
3. The relative amount (α value) of chemical species is important for analyzing an acid/base titration process. Please use the following figure to define what kind of acid/base titration it is and describe how different chemical species change in the whole process. (10%)



4. A cyclic voltammogram is obtained in an electrochemical experiment shown as below. Please describe the detail chemical processes in this experimental operation. (10%)



5. Please compare the difference and similarity between "high-performance liquid chromatography" and "gas chromatography". (10%)
6. Please describe what is "capillary electrophoresis/mass spectrometry". (10%)
7. Please define the concept of "electrical double layer" of a colloid. (10%)
8. Please define "atomic absorption spectrometry". (10%)
9. Please compare the difference and similarity between "fluorescence" and "phosphorescence" spectroscopy. (10%)
10. Please draw an instrument setup suitable for infrared absorption spectroscopy. (10%)

試題隨卷繳回