V P & R P T P Science College
Vallabh Vidyanagar
B. Sc. (Third Semester Examination)
US03EICH01 – TRADITIONAL METHODS OF ANALYSIS

Wednesday, 07th October, 2015
Time: 3.00p.m. to 4.00 p.m. Total Marks: 25

Instructions: (i) All questions are to be attempted in your answer book.
(ii) Figures to the right indicate marks.

Q.1. Answer the following: [03]

i. The substance used for the detection of end point by colour change is...
(a)buffer (b) indicator
(c)reagent (d) none of them

ii. EDTA is the best_____.
(a) complexing agent (b) indicator
(c) buffer (d)all of these

iii. Which of the following is a redox titration?
(a) titration of HCl with NaOH
(b) titration of CH_3COOH with NaOH
(c) titration of $FeSO_4$ with $KMnO_4$
(d) all of these

Q.2. Answer any two: [04]
i. Define with proper example: Molarity & Normality
ii. Define with proper example : Chelating agent & Buffer solution
iii. Define with proper example: Oxidizing agent & Voltage

Q.3. By taking example of strong acid and strong base titration, discuss the neutralization curve. [06]

OR

Q.3. Show that at the color change interval, pH of the system is $pH = pK_{In} \pm 1$. [06]

Q.4. Discuss different types of EDTA titrations. [06]

OR

Q.4. What are the requisites for metal ion indicator for use in visual detection of end point? [06]

Q.5. Explain titration curve for iron (II) & cerium (IV) in detail. [06]

OR

Q.5. Whether $KMnO_4$ acts as an primary standard? Why? What are the precautions to be made to store it? [06]

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