

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Chemistry

Unit test (2017-18)

Subject: Analytical Chemistry

Class: B.Sc. III

Date: 28/12/2017

Marks: 25

Q.1. Selective the most correct alternatives for each of the following and rewrite the sentences.

i) According to Ostwald's acid-base indicators are either

- a) weak organic acid or bases b) strong organic acids or bases c) weak inorganic acid or bases
d) weak inorganic acid or bases

ii) Blue colour of Eriochrome black T indicator is due to the ionic form.

- a) D^{-3} b) HD^{-2} c) H_2D^{-} d) NaH_2D

iii) The pH at which titration in presence of given indicator is ended is called

- a) end point b) equivalence point c) titration exponent d) colour change interval

iv) The values of ionization constant for weak acids and weak bases are

- a) low b) high c) very high d) medium

v) pH range of methyl orange indicator is

- a) 3.1 to 4.2 b) 4.2 to 6.3 c) 6.3 to 7.1 d) 5.2 to 6.3

Q.2. Solve any two of the following.

a) Explain the choice of indicator for the titration of acetic acid against KOH with the help of titration curve.

b) Explain in detail Ostwald's ionization and quinoid the with example.

c) What is mean by metallochromic indicators? Give the structure of Eriochrome Black T indicator and explain its colour change with the change of pH and on complexation with a metal.