

S.Y.B.PHARM. SEMESTER-III (2011 COURSE) : SUMMER - 2018

SUBJECT : PHARMACEUTICAL ANALYSIS – I

Day : **Friday**

Date : **27/04/2018**

S-2018-3953

Time : **02.00 PM TO 05.00 PM**

Max. Marks : 80

N.B.:

- 1) **Q.No.1** and **Q.No.5** are **COMPULSORY**. Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** Attempt **ANY FIVE** of the following: [10]
- a) Classify types of error.
 - b) How to prepare standardize 0.25N HCl and 0.25N NaOH solution?
 - c) Why glycerine is added in assay of boric acid?
 - d) State advantages of non-aqueous titration.
 - e) Define the terms : i) Buffer ii) Buffer action iii) Buffer index and pH.
 - f) Enlist types of indicators used in non-aqueous.
- Q.2** a) Discuss in detail about dissociation constant of strong acid and strong base. [08]
b) Describe in detail salt hydrolysis. [07]
- Q.3** a) Explain neutralization curve for weak acid and weak base. [08]
b) Discuss on types of solvents used in non-aqueous. Write about differencing and leveling effect. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]
- a) Theories of indicators used in Acid base titration
 - b) Calibration of volume apparatus
 - c) Applications of non-aqueous titration
 - d) Buffering capacity

SECTION – II

- Q.5** Attempt **ANY FIVE** of the following: [10]
- a) Why KI is added during preparation of Iodine solution.
 - b) Calculate the solubility of magnesium hydroxide in mg/100ml, if the solubility product of magnesium hydroxide is 6.03×10^{-10} .
(Mol. Wt of Mag-hydroxide is 58.33)
 - c) Write theory, principle and reaction involved in assay of H₂O₂ and Sodium chloride.
 - d) Why ammonium buffer is added?
 - e) Write preparation and standardize of 0.1N Silver nitrate and 0.05N EDTA solution.
 - f) Write significance of K_{sp}.
- Q.6** a) How end point is detected in complexometric titration? Explain types of EDTA titrations. [08]
b) Describe method to calculate equivalent weight in redox titrations. [07]
- Q.7** a) Discuss Volhard's method of precipitation in detail. [08]
b) Explain ceriometric type of titrations. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]
- a) Fajan's Method
 - b) Permanganate titrations
 - c) Chelon effect
 - d) Unit operations in Gravimetry

* * * *