

**S.Y.B.PHARM. SEMESTER-III (2011 COURSE) : WINTER -
2017**

SUBJECT : PHARMACEUTICAL ANALYSIS-I

Day : **Monday**
Date : **13/11/2017**

W-2017-3820

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 attempt any **TWO** questions from Section-I and Section-II.
- 2) Answers to the both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.
- 4) Draw neat and labeled diagrams **WHEREVER** necessary.

SECTION-I

- Q.1** Attempt any **FIVE** of the following: (10)
- a) Write about calibration of volumetric apparatus.
 - b) Define Primary standard solution write its properties.
 - c) How to prepare and standardize 0.1 N perchloric acid?
 - d) Why blank titration is performed in assay of Aspirin?
 - e) Write reaction, principle involved in assay of sodium acetate.
 - f) Write reaction, principle involved in assay of Boric acid.
- Q.2** a) Discuss about different solvents used in non-aqueous titrations. Write levelling and differentiating effect of these solvent. (08)
- b) Explain buffers in detail. What is buffer index? Derive an equation to calculate pH of a buffer solution. (07)
- Q.3** a) Discuss theories for color change shown by acid base indicators. (08)
- b) Derive an expression for dissociation constant for weak acid. Give chemical reaction and principle involved in assay of Aspirin. (07)
- Q.4** Write short notes on any **THREE** of the following: (15)
- a) Neutralization curves of weak acid and weak base
 - b) Salt hydrolysis
 - c) Minimization of errors
 - d) Non-aqueous titration application

SECTION-II

- Q.5** Attempt any **FIVE** of the following: (10)
- a) Calculate Ksp of (AgCl) if its solubility at 25⁰ is 1.435 x 10⁻³ gm/lit [Molecular Weight of AgCl = 143.5].
 - b) How will you prepare and standardize 0.25 N Iodine solution?
 - c) State and explain various types of EDTA titration.
 - d) Write principle involved in assay of sodium chloride.
 - e) Write significance of Ksp.
 - f) Why nitrobenzene or dibutyl phthalate is added during volhard's method?
- Q.6** a) Give theory of Redox titration. Discuss various indicators used in redox add a note on permanganate titration. (08)
- b) Describe Mohr's method of precipitation in detail. (07)
- Q.7** a) Explain in detail determination of end point in complexometry. (08)
- b) Describe methods to calculate equivalent weight in redox titrations. (07)
- Q.8** Write short notes on any **THREE** of the following: (15)
- a) Redox potential
 - b) Iodine Titrations
 - c) Redox applications
 - d) Masking and demasking agents

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