

Paper Id: **150143**Roll No:

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B. PHARM
(SEM-I) THEORY EXAMINATION 2019-20
PHARMACEUTICAL ANALYSIS-1

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Define the term precision.
 - b. What is primary standard?
 - c. Explain the resonance theory of acid base indicators.
 - d. Define the acid and base as per Arrhenius theory.
 - e. Give examples of external indicators for Redox titrations.
 - f. Name the methods to write reduction-oxidation titration.
 - g. How does pH affect the solubility of a precipitate?
 - h. What is the impact of common ion effect on solubility of precipitate?
 - i. What do you mean by coagulation value?
 - j. Give two examples of inorganic precipitants.

SECTION B

- 2. Attempt any three of the following: 10x3=30**
- a. Giving suitable examples elaborate various volumetric methods.
 - b. Discuss the neutralization curves of
 - (i) Strong acid and weak base
 - (ii) Weak acid and weak base
 - c. Describe, how the equivalent weights are calculated for oxidizing and reducing agents?
 - d. How will you prepare and standardize 0.1 M silver nitrate solution?
 - e. How law of mass action and reversible reactions are helpful for gravimetric analysis? Explain.

SECTION C

- 3. Attempt any one part of the following: 10x1=10**
- a. Enumerate and define the various methods to express the solution concentration.
 - b. Explain the terms: standard solution, titrant, titrand, indicator, titration error.
- 4. Attempt any one part of the following: 10x1=10**
- a. Write note on:
 - (i) Selection of acid base indicator (ii) Henderson-Hasselbalch equation
 - b. Write note on: (i) Law of mass action (ii) Titration curve for polybasic acids
- 5. Attempt any one part of the following: 10x1=10**
- a. Write note on:
 - (i) Comparison between iodometric & iodimetric titrations, (ii) Redox indicators.
 - b. Explain permanganate titration in detail.
- 6. Attempt any one part of the following: 10x1=10**
- a. Write note on: (i) Solubility product (ii) Mercuric nitrate indicators
 - b. Explain in detail the Volhard's indicator
- 7. Attempt any one part of the following: 10x1=10**
- a. Enumerate and explain all the steps of gravimetric analysis.
 - b.
 - (i) Thermo-gravimetric curves (ii) Advantages of gravimetric analysis.