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B PHARM
(SEM I) THEORY EXAMINATION 2017-18
PHARMACEUTICAL ANALYSIS-I

Time: 3 Hours ***Total Marks: 100***

Notes: *Attempt all Sections. Assume any missing data.*

SECTION A

1. Attempt *all* questions in brief. 2 x10 = 20

a. Define pharmaceutical analysis.
b. Define Acid and Base according to lewis theory.
c. Write a formula of Molarity and Normality.
d. Draw the structure of phenolphthalein in two different medium.
e. Define solubility product and show its relation with ionic product.
f. Differentiate between Titrant and Titrand.
g. Define Supersaturation, Co-precipitation, Post-precipitation and Digestion.
h. Define concept of Oxidation and Reduction.
i. Calculate Equivalent weight of $Kmno_4$ in different medium.
j. Differentiate between determinate and indeterminate error.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. Discuss the method of expressing concentration of solution.
b. Classify Acid-Base titration along their neutralization curve.
c. Explain the theory of weak base or weak acid in non aqueous titration.
d. Discuss titrations involving ceric ammonium sulphate and potassium permanganate.
e. Write a short note on Mohr's, Volhard's and Fajan's method in precipitation titration.

SECTION C

3. Attempt *any one* part of the following: 10 x 1 = 10

a. Differentiate between iodimetry and iodometry.
b. Write a short note on Law of mass action and Common ion effect.

4. Attempt any *one* part of the following: 10 x 1 = 10

a. What are Buffers? Explain the mechanism of action of buffer.
b. What are thermogravimetric curves? Explain with example barium as barium sulphate.

5. Attempt any *two* parts of the following: 5 x 2 = 10

a. Describe the significance of quantitative analysis in quality control.
b. What are precipitation titrations? Discuss effect of Acid, temperature and solvent on solubility of precipitates.
c. What is salt hydrolysis? Discuss the classification of salt hydrolysis.

6. Attempt any *one* part of the following: 10 x 1 = 10

a. What are organic precipitants? Also discuss their role in gravimetry.
b. What are primary standards? And how they are differ from secondary standards?

7. Attempt *any one* part of the following: 10 x 1 = 10

a. What are role of solvents in Acid base titrations?
b. What are Redox indicators? Briefly describe Oxidation-reduction curves.

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