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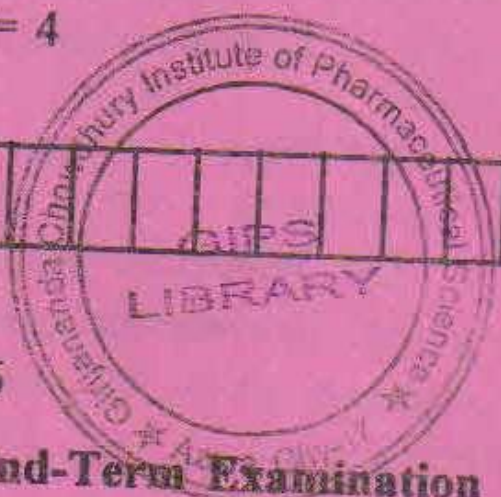
Total No. of printed pages = 4

PY 132203

Roll No. of candidate

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2016



B. Pharm 2nd Semester End-Term Examination
PHARMACEUTICAL ANALYSIS - I

Full Marks-100 Pass Marks-35 Time-Three hours

The figures in the margin indicate full marks
for the questions.

1. A. Answer any *six* of the following questions :
2×6=12
- (a) What is the difference between precision and accuracy ?
 - (b) What are primary and secondary standards ?
Give examples.
 - (c) Define mean and standard deviation.
 - (d) How can you differentiate between iodimetric and iodometric titration ?
 - (e) Ferroin is a type of indicator.

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- (f) is used as an adsorption indicator in Fajan's method of precipitation titration.
- (g) What is common ion effect ?
- (h) What is the use of masking agent in gravimetric analysis ?

B. Answer any six of the following questions :
 $3 \times 6 = 18$

- (a) Distinguish Lewis acids and bases from Bronsted-Lowry acids and bases. Give an example of each. $1.5 + 1.5 = 3$
- (b) Briefly explain the concept of co-precipitation and post-precipitation. 3
- (c) Give an account on ionic product of water. 3
- (d) What are the different methods of expressing concentration ? 3
- (e) State the rules of retaining significant digits. 3
- (f) What do you mean by equivalent weight and state the law of mass action.
 $1.5 + 1.5 = 3$

- (g) Classify volumetric method of chemical analysis and what is the role of ignition in gravimetric analysis ? $1.5 + 1.5 = 3$
- (h) State briefly the principle of thermogravimetric analysis. 3

2. Answer any eight of the following questions :
 $5 \times 8 = 40$

- (a) Write a note on redox indicators.
- (b) State the type of errors in analysis with examples. How are they minimised ? $3 + 2 = 5$
- (c) Derive the Henderson-Hasselbach equation. 5
- (d) Explain briefly the various steps involved in gravimetric analysis. 5
- (e) Determine the molarity of Cl⁻ in an unknown solution that has been treated with excess of AgNO₃ to obtain a precipitate of 0.5424 g of AgCl. (Formula mass of AgCl = 143.32 g/mol). 5
- (f) Derive the relationship between K_a and K_b of a conjugate acid-base pair. 5
- (g) Write a note on polyprotic acids and bases. 5

(h) Write about the preparation and standardization of 0.1M potassium permanganate with principle and reaction. 5

(i) Briefly discuss the various factors which affect the solubility of precipitate. 5

(j) Write a note on neutralization curve. 5

3. Answer any *three* of the following questions :

$$10 \times 3 = 30$$

(a) Explain the theories and choice of indicators for acid-base titrations. What do you mean by mixed indicators ? 8+2=10

(b) What is buffer solution and explain about buffer mixture of a weak acid and a weak base and its salts. 3+7=10

(c) Explain the Gay-Lussac, Volhard's and Mohr's method of precipitation titration with suitable examples and reactions. 3+3.5+3.5=10

(d) Describe the principle involved in redox titration. Write a half-reaction for redox reaction. Write a note on oxidation-reduction curve. 5+2+3=10