Dec. 2002.

Roll No. .....

Total No. of Questions : 7]

[Total No. of Printed Pages : 4

1.1.1

Pharmaceutical Analysis

(B.Pharmacy, 1st Semester, 2122)

Time : 3 Hours] Maximum Marks : 80

Note : Section A is compulsory. Attempt 2 questions from section B and any three questions from section C. Log-Tables / Tables etc. will be provided.

Section–A

Marks : 2 Each

1. (a) What is meant by the terms 'Major Constituent', 'Minor Constituent' and 'Trace Constituent' ?

(b) What is the importance of standard deviation in statistical analysis ?

(c) Give *one* example each of Arrhenius base, Bronsted acid, Lewis acid.

(d) How can you express the strength of acid ?

(e) What should be approximate pH of a solution of sodium acetate ?

(f) Write a note on Polyprotic acids.

(g) What is meant by the terms aprotic, amphiprotic and protic ?

(h) What is a Monograph ? What salient information does it contain ?

(i) What are 'Mixed Indicators' ? Do they offer any advantage over single indicator ?

(j) What primary standards are used for the following standardizations :

Iodine Solution, Silver Nitrate Solution, Sodium Hydroxide Solution, Sulphuric Acid.

(k) A freshly prepared potassium permanganate solution has to be boiled. Why ?

(l) Solubility of silver chloride is 0.0015 g/l. Calculate its solubility product.

(m) What indicators will be employed in Assay for Acetic Acid, Mohr Method, Volhard Method, Boric Acid assay.

(n) What is the pH of a solution containing 0.0000343 g.eqt. of H_3O^+ per litre ?

(o) Calculate and express to correct significant figures : $2.5 \times 500.01 \times 10.03$.

Section–B

Marks : 5 Each

2. 20 determinations were made for weight of paracetamol in tablet samples. Mean result was 495.2 g. Calculate whether the result is significant in the assay if true value is 488.5 g and standard deviation is 0.80.

3. Give a brief account of organic precipitants used in gravimetry.

4. What is Solubility Product ? Discuss its significance in pharmaceutical analysis.

5. Which indicator should be used in titration of aqueous ammonia against standard HCl solution ? Give reason in brief.

Section–C

Marks : 10 Each

6. Two different methods were used to analyze five different sodium carbonate samples.

Sample	Method A	Method B
1	17.6	17.9
2	6.8	7.1
3	14.2	13.8
4	20.5	20.3
5	9.7	10.2

Is there significant difference between the two results ?

7. What are Neutralization curves ? Discuss giving examples of each type.

8. Discuss the theory of Oxidation-Reduction indicators. Give an account of redox indicators.

9. Write short notes on : 3.7

(a) Fractional precipitation

Peptization and flocculation in gravimetric