WHIN

Code No. : **7009**

FACULTY OF TECHNOLOGY
B. Pharmacy II Year I Semester (Suppl.) Examination, June 2010
PHARMACEUTICAL ANALYSIS —I
(Chemical Analysis)

Time: 3 Hours] **[Max. Marks: 70**

*Note : Answer **all** questions. **All** questions carry **equal** marks.*

1. a) i) What is a primary standard ? Explain briefly giving examples. **4**

ii) Define the terms :

i) Ruggedness

ii) Precision

iii) Linearity

iv) Range

v) Error. **(2x5=10 Marks)**

OR

b) i) What is meant by calibration and how do you calibrate the pipette ? **6**

ii) Analyses of a sample of iron ore gave the following percentage values for the iron content : 7.08, 7.21, 7.12, 7.09, 7.16, 7.14, 7.07, 7.14, 7.18, 7.11. Calculate the mean and standard deviation for the values. **8**

2. a) i) Write notes on the following :

A) Different concepts of Acidity and Basicity. **6**

B) Neutralization indicators. **4**

ii) **The solubility product of silver chloride is 2.8×10^{-10} mole/ Litt. Calculate its solubility in g / Litre.** **4**

OR

Code No. :

b) i) Derive an equation to calculate the pH value of an aqueous solution of a salt of weak base and strong acid. 6

ii) What are buffers ? How they are prepared ? Explain their mechanism of action. Define buffer capacity. 8

3. a) i) Write notes on Redox indicators. 5

ii) Discuss in detail the different steps involved in a gravimetric analytical technique with help of an example.

OR

b) i) Write notes on adsorption indicators. 6

ii) Explain Volhard's method for determination of chlorides. 8

4. a) i) Discuss the principle, procedure and apparatus used in the assay of oxygen. 7

ii) Write about different solvents and indicators used in Non-aqueous titrations. 7

OR

b) i) Discuss the principle and procedure for the assay of calcium gluconate. 7

ii) Discuss the principle of following : (4+3)

i) Potassium iodate titrations

ii) Argentometry titrations.

5. a) i) Calculate the volume of water to be added to 100 ml 72% sulphuric acid (Specific gravity 1.63) to convert it into 26% acid. 4

ii) Calculate the molarity of sodium carbonate when 25 ml of it neutralises 30 ml of decimolar hydrochloric acid. 4

iii) Calculate the no. of moles of sodium hydroxide in 200 ml of 0.1 M sodium hydroxide solution. 3

iv) 25.0 ml of Barium chloride was treated with excess of sulphuric acid. If the weight of resultant Barium sulphate is 0.3298 g, Calculate the weight of Barium chloride in the given solution (Ba = 137, Cl = 35.5, S = 32, 0 = 16). 3

OR

b) i) Calculate the weight of Barium chloride required to produce 0.3 g of silver chloride (Ba = 137, Ag = 108, Cl = 35.5). 3

ii) A sample containing 0.2 g of chloride gave 0.125 g precipitate of silver chloride. Calculate the percent of chlorine in the sample. 5

iii) How many grams of sodium are contained in 25.0 g of sodium sulphate ? (Na = 23, S = 32, 0 = 16). 2

iv) What is the empirical formula of an organic compound whose percentage composition is ? 4

i) 29.8% C, 6.3% H, 44% Cl, 19.9% 0

ii) 48.7% C, 13.6% H, 37.8% N.
