



Code No. 4409

FACULTY OF PHARMACY**B. Pharmacy II Year I Sem. (Main) Examination, November/December 2010
PHARMACEUTICAL ANALYSIS — I (Chemical Analysis)**

Time : 3 Hours]

[Max. Marks: 70

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

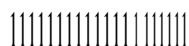
1. a) i) Define and explain. 6
A) Relative Error B) Indeterminate Error C) Gross Error
ii) Describe the methods of expressing concentration. 4
iii) Calculate the equivalent weight of the following : 4
A) $K_2Cr_2O_7$ B) NaOH C) H_2SO_4 D) $KMnO_4$
OR
- b) i) What are Primary standard and Secondary standard substances ? 7
Mention few examples of each.
ii) The following results were obtained in the replicate analysis of a blood sample for its lead content 0.754, 0.756, 0.752, 0.751 and 0.760 PPM pb. Calculate the Mean, Standard deviation, Range and Median. 7
2. a) i) What is common Ion Effect ? Discuss its applications in pharmaceutical analysis. 8
ii) Discuss the modern concepts of acidity and basicity. Give some examples. 6
OR
- b) i) How much water is to be added to a 150 ml of solution of 0.25N HCl to make it 0.1 N solution ? 4
ii) Write a note on neutralization indicator. 4
iii) Derive an equation to calculate the pH value of an aqueous solution of a salt of weak acid and strong base. 6
3. a) i) Write a note on 4
A) Coagulation B) Digestion
ii) Explain the theories involved for determination of chloride in 10
A) Mohr's method B) Volhard's method C) Fajan's method

OR

(This paper contains 2 pages)

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b) i) What is oxidation-reduction potential and write how it is determined the redox system ?

ii) What are Redox Indicators ? What is the chemical process causes them to change color ?

6

iii) Calculate the normality of the following 2M $K_2Cr_2O_7$.

4. a) i) How do you prepare and standardise the following solutions

8

A) 0.01M EDTA

B) 0.1N $HClO_4$

ii) How do you estimate the hardness of water using complexometry ?

6

OR

b) i) What is the difference between Iodometry and Iodimetry ? Explain with the help of one suitable examples. Write the principle and procedure of Iodometric assay of any official compound.



ii) Write a note on different solvents used in Non-aqueous titration.

4

5. a) i) How much is mass of NaOH required to convert 7.3 g of HCl to NaCl ?

4

ii) Calculate the percentage composition of elements in $Na_2S_2O_3$

(Atomic weight Na, S, O are 23, 32, 16 respectively)

4

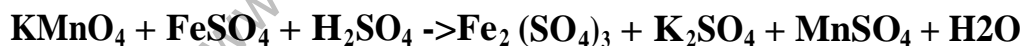
iii) Define Stoichiometry, mole and percentage yield.

6

OR

b) i) How will you balance the following equation by applying Ion-electron method ?

5



ii) What is Avagadro's number ? Explain how the moles of elements are measured.

7

iii) Calculate the normality of 10 milli moles of $Na_2S_2O_3$ in 200 ml of solution.

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