Registration no:

Total Number of Pages: 2   **B.PHARM**
15PH201

2ⁿᵈ Semester Regular Examination 2015-16
PHARM. ANALYSIS - I
Branch: Pharmacy
Time: 3 Hours
Max Marks: 100
QUESTION CODE: W508
Answer Part-A which is compulsory and any four from the Part-B.

The figures in the right hand margin indicate marks.
Part-A (Answer all the questions)

Q.1   Answer the following   **(2 x 10)**

a)   The difference between equivalence point and end point of titration is called as _____.

b)   The pH of 0.01N nitric acid is _____.

c)   _____ is used as a coating agent in Volhard's method of titration.

d)   Two indicators used in acid-base titration are _____ and _____.

e)   Eriochrome black T and murexide are used as indicators in _____ method of titration.

f)   Examples of two organic precipitants are _____ and _____.

g)   0.0253g contains _____ significant figures.

h)   The solution which resists the change in pH even after addition of small amount of acid or base is called _____.

i)   In titration, the solution which is generally taken in a burette is called _____ and the substance which is titrated is called _____.

j)   Balance the redox reaction: $Cr_2O_7^{-2} + Fe^{+2} \rightarrow Fe^{+3} + Cr^{+3}$

Q.2   Answer the following   **(2x10)**

a)   Define and differentiate between accuracy and precision.

b)   Classify different types of errors and give one example from each category.

c)   What is Universal indicator?

d)   Define Lewis acid and base. Give at least one example from each.

e)   What is common ion effect?

f)   Give the principle of Fajan's method of titration.

g) What is self indicator? Give example.

h) Why acetic anhydride is used in the preparation of 0.1N Perchloric acid?

i) What are Argentometric titrations?

j) What are ligands? Classify them with examples.

Part-B (Answer any four questions)

Q.3 **a)** Write the steps for minimization of errors in pharmaceutical analysis. **(7)**

b) What do you mean by neutralization curve? Mention its significance by taking the example of titration of a strong acid against a strong base. **(8)**

Q.4 **a)** Define and describe different types of complexometric titrations. **(6)**

b) Write a note on chelating agents. **(3)**

c) Give the procedure for determination of calcium by EDTA titration. **(6)**

Q.5. **a)** What are the advantages of non-aqueous titrations? **(2)**

b) Give a note on the solvents used in non-aqueous method of titrations. **(6)**

c) Write the method of preparation and standardization of 0.1N Potassium methoxide. **(7)**

Q.6 **a)** Write down briefly the steps involved in gravimetric analysis by precipitation methods. **(8)**

b) What is thermogravimetric curve? Mention its features. Mention the application with suitable example. **(7)**

Q.7. **a)** Give the principle behind Mohr's method of titrations. **(6)**

b) Explain the principle and procedure behind estimation of sodium chloride by Volhard's method of titration. **(9)**

Q.8 **a)** Write the theory of redox titrations. **(3)**

b) How will you calculate strength and equivalent weights of oxidizing and reducing agents? Explain with suitable examples. **(6)**

c) Write a note on preparation and standardization of 0.1N $KMnO_4$ solution. **(6)**

Q.9 Answer the following (Any three) **(5x3)**

a) Masking and demasking in complexometric titration.

b) Ideal characteristics of primary standard

c) Quinonoid theory of indicators

d) Law of mass action