B. Pharm. Semester-II (C.B.S.) Examination
PHARMACEUTICAL ANALYSIS–I
Paper–IV : 2T4

Time—Three Hours]   [Maximum Marks—80

N.B.:–   (1)   Question No. 1 compulsory.

(2)   Solve any **FOUR** questions from the remaining.

(3)   Draw neat labelled diagram wherever necessary.

(4)   Use of electronic calculator is permitted.

1.   Answer any **FIVE** of the following :

(a)   Explain why chloride estimation by Mohr's method need to be performed in neutral media.

(b)   Comment on the use of acetic anhydride in preparation of 0.1 M acetous perchloric acid.

(c)   Explain why aqueous solution of sodium chloride is neutral whereas solution of sodium acetate is basic.

(d) Give advantages of ceric ammonium sulphate over other oxidising agent in redox titrations.

(e) Explain how aging and digestion helps in obtaining better quality precipitate in gravimetry.

(f) Explain the concept of molarity and normality with their relative merits and demerits.   4×5

2. What are neutralization indicators ? Give theory of their action and explain theoretical basis for selection of suitable indicators for acid-base titrations.   15

3. (a) Give advantages and limitations of non-aqueous titrations and explain alkalimetry in non-aqueous media.
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   (b) Define accuracy, precision and error. Give classification of errors with suitable examples.   5

4. Classify the redox indicators with suitable examples and explain theory of internal redox indicators. Give the method for preparation, standardization and storage of 0.02 M solution of potassium permanganate.   15

5. What are complexes and chelates ? Describe EDTA as a titrant in complexometry. Elaborate the ways and means of improving selectivity of complexometric titrations and explain how will you determine aluminium and magnesium present in admixture.   15

6. What is gravimetry ? Give its merits and demerits. Explain co-precipitation and post-precipitation of impurities and their minimisation in gravimetric analysis. Add a note on gravimetric assay of piperazine salts.   15

7. Explain the theory of adsorption indicators and give their examples with conditions of their use. Add a note on preparation and stardardisation of 0.1 M silver nitrate solution.   15