

**B. PHARM.  
FIRST SEMESTER  
PHARMACEUTICAL ANALYSIS-I  
BP102T  
[USE OMR SHEET FOR OBJECTIVE PART]**

**SET  
A**

Duration : 3 hrs.

Full Marks : 75

[ PART-A : Objective ]

Time : 30 min.

Marks : 20

*Choose the correct answer from the following:*

**1×20=20**

1. Which of following is not a primary standard
  - a. Sodium Carbonate
  - b. KBr
  - c. Oxalic acid
  - d. NaOH
2. Which of the following is aprotic solvent
  - a. Pyridine
  - b. Glacial acetic acid
  - c. Benzene
  - d. Ethylenediamine
3. IP assay of calcium gluconate is carried out by
  - a. Iodometry
  - b. Complexometric titration
  - c. Argentometry
  - d. Iodimetry
4. The colour changes is due to ionization of the acid base indicator
  - a. Ostwald theory
  - b. Chromophore theory
  - c. Quinonoid Theory
  - d. Resonance Theory
5. Indicator used for complexometric titration
  - a. EDTA
  - b. Phenolphthalein
  - c. Methyl red
  - d. Solochrome Black T
6. Which of the following is used as demasking agent
  - a. Thioglycerol
  - b. Potassium cyanide
  - c. Formaldehyde-acetic acid
  - d. Copper
7. Oxidation-reduction titration is also known as
  - a. Complexometric titration
  - b. Redox titration
  - c. Gravimetric titration
  - d. Gasometric titration
8. An example of primary standard substance is
  - a.  $\text{Na}_2\text{CO}_3$
  - b.  $\text{FeSO}_4$
  - c.  $\text{NH}_4\text{OH}$
  - d. NaOH
9. A solution of known concentration is the definition of a
  - a. Buffer solution
  - b. Standard Solution
  - c. Neutral Solution
  - d. Saturated solution
10. .... Involve addition of silver nitrate to form the precipitates of an insoluble silver salt
  - a. Conductometry
  - b. Iodometry
  - c. Argentometry
  - d. Dichrometry

11. Iodine is titrated directly with reductant in
  - a. Iodometry
  - b. Iodography
  - c. Cerimetry
  - d. Iodimetry
12. Primary amine is reacted with ..... in cold acid to form diazonium salt.
  - a. Sodium nitrate
  - b. Silver nitrate
  - c. Sodium Hydroxide
  - d. Sodium Peroxide.
13. API Stands for
  - a. Active Pharmaceutical ion
  - b. Active Pharmaceutical Ingredient
  - c. Active Pharmacy Interpretation
  - d. Acute Pulmonary Interaction
14. 20gm NaOH in 500ml=
  - a. 0.5 M
  - b. 1M
  - c. 0.1 M
  - d. 0.25M
15. Solvent which are chemically inert and doesn't donate or accept proton are
  - a. Protophillic
  - b. Protogenic
  - c. Amphiprotic
  - d. Aprotic
16. SI unit of conductance is
  - a. Seimens
  - b. Mho
  - c. Volt
  - d. None of these
17. Potentiometry is an..... Method of analysis
  - a. Spectroscopic
  - b. Electrochemical
  - c. Analytical
  - d. None of these
18. Which is the synonym of Solochrome Black T
  - a. Erichrome Black T
  - b. Thymol Black
  - c. Mordant Black II
  - d. Both (a) and (c)
19. What indicator is used for the estimation of Sodium Chloride by Mohr's method?
  - a. Potassium dihydroxide
  - b. Mordant Black II
  - c. Methyl red
  - d. Potassium chromate
20. Iodometry is also known as
  - a. Direct titration
  - b. Back Titration
  - c. Replacement titration
  - d. Indirect titration

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**PART-B : Descriptive**

Time : 2 hrs. 30 min.

Marks : 35

*[ Answer any seven (7) questions ]*

1. Discuss Iodometry and Iodimetry titration with applications. 5
2. What are primary and secondary standards? Give the ideal requirements of primary standards. 2+3
3. Explain different types of solvents used for non-aqueous titrations with examples. 5
4. What is back titration? Explain with example 5
5. What is quinonoid theory? Explain in details Ostwald's theory applying law of mass action. 2+3
6. Answer the following (*Any two*) 2.5+2.5
  - a. Precision
  - b. Accuracy
  - c. Rules about the significant figures
7. Write down the difference between Mohr's method and Fajan's method. 5
8. Why there is no need to standardize oxalic acid? Write down the principle and preparation of sodium thiosulphate. 1+4
9. What is masking and demasking agent. What is the need of masking and demasking agent? 2+3

**( PART-C : Long type questions )**

*[ Answer any two (2) questions ]*

1. Describe a method of analysis to estimate halide ion using ferric alum as an indicator and  $\text{NH}_4\text{SCN}$  as a standard? Explain the principle and procedure involve in estimation of sodium chloride. 5+5=10
2. Explain the role of analytical chemistry. Classify different techniques of pharmaceutical analysis. 3+7=10
3. Write different sources of error? Explain different theories of acid and bases. 5+5=10

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