

**B. PHARM.
FIRST SEMESTER
PHARMACEUTICAL ANALYSIS I
BP102T**

**SET
B**

[USE OMR FOR OBJECTIVE PART]

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

Marks : 20

1×20=20

PART-A: Objective

Choose the correct answer from the following:

1. Perchloric acid
 - a. Oxidizing agent
 - b. Non basic substance
 - c. Reducing agent
 - d. Alkaline solution
2. GAA stands for
 - a. Glacial acetic acid
 - b. Glacial artificial acid
 - c. Galic acetic acid
 - d. Glacial acetone acid
3. Indicator used in the standardization of 0.1 N HClO₄ is.....
 - a. Methyl red
 - b. Crystal violet
 - c. Sodium methoxide
 - d. phenolphthalein
4. Molecular weight of sodium benzoate
 - a. 144.11 g/mole
 - b. 182.51 g/mole
 - c. 141.44 g/mole
 - d. 181.22 g/mole
5. Levelling effects are observed under the condition of.
 - a. Photophilic solvents
 - b. Amphoteric
 - c. Aprotic solvents
 - d. Amphiprotic
6. Aprotic solvents are
 - a. Possess low dielectric constants
 - b. Possess no dielectric constants
 - c. Possess high dielectric constants
 - d. Possess dielectric constants
7. Non aqueous titration is also called as
 - a. Argentometric method
 - b. Differentiating effect
 - c. Levelling effect
 - d. Aprotic solvents
8. Molecular formula of perchloric acid
 - a. HClO₄
 - b. HClO
 - c. HClO₂
 - d. HClOH₄
9. How many types is there in non-aqueous titration
 - a. 4
 - b. 2
 - c. 5
 - d. 6

10. -----is the indicator of acid base titration.
 - a. Phenolphthalein
 - b. Methoxide
 - c. Carbon
 - d. Methanol
11. Given the following which is the widely used quantitative analytical method?
 - a. Non-aqueous titration
 - b. Acid base titration
 - c. Aqueous titration
 - d. Volumetric analysis
12. Which analytical technique is used for determining the number of oxidizing agents?
 - a. Oxidation reduction titration
 - b. Bromometry
 - c. Complexometry
 - d. None of these
13. Analytical chemistry is the study of____
 - a. Identification
 - b. Quantification
 - c. Separation
 - d. All of these
14. API stands for
 - a. Active pharmacy interpretation.
 - b. Cute pulmonary interpretation.
 - c. Active pharmaceutical ion.
 - d. Active pharmaceutical ingredient.
15. Chromatography is
 - a. Separation technique
 - b. Three-layer chromatography
 - c. Sedimentation technique
 - d. Through layer chromatography
16. What is the role of phenolphthalein in an acid-base titration?
 - a. It acts as a reactant
 - b. It determines the amount of titrant used
 - c. It indicates the pH change by changing colour
 - d. It maintains the pH of the solution
17. The difference between a measured value and true value is known as-
 - a. Accuracy
 - b. Precision
 - c. Error
 - d. Deviation
18. If you have 10%(w/v) NaCl solution, what does this mean?
 - a. 10 milligrams of NaCl in 100 millilitres of solution
 - b. 10 grams of NaCl in 100 millilitres of solution
 - c. 10 grams of NaCl in 100 grams of solution
 - d. None of the above
19. Which of the following compound is commonly used as a primary standard in acid-base titration?
 - a. Sodium hydroxide (NaOH)
 - b. Hydrochloric acid (HCL)
 - c. Potassium hydrogen phthalate
 - d. Sulphuric acid(H₂SO₄)
20. Normality is a measure of concentration that is specifically related to?
 - a. Molar mass of the solute
 - b. Molecular weight of the solute
 - c. Equivalent weight of the solute
 - d. Molecular weight of the solute

(PART-B: Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

- | | |
|---|-------------|
| 1. Write five indicators used in complexometric titration with structure. | 3+2=5 |
| 2. Write the factors effecting the precipitation in gravimetry.
Or
Write a note on hydrogen ion concentration. | 5 |
| 3. Define errors. Explain the types of errors and minimisation of errors. | 1+2+2
=5 |
| 4. Write the end point determination in argentometric titration. Write the difference between Mohr's method and Volhard's method. | 2+3=5 |
| 5. What are the titrants used in acidimetry titration and alkalimetry titration. Write the estimation of sodium benzoate. | 2+3=5 |
| 6. Write the advantages of gravimetric analysis. | 5 |
| 7. Write four indicators name used in complexometric titration and explain any two with structure. | 1+2+2
=5 |
| 8. Define oxidation and reduction. Write the oxidation reduction types and explain. | 1+4=5 |
| 9. Write the difference between volumetric and gravimetric analysis. | 5 |

(PART-C : Long type questions)

[Answer any two (2) questions]

1. Explain the different techniques of analysis. Write a note on law of mass of action. Write the standardization of 0.1N oxalic acid solution. 4+4+2
=10
2. Define non aqueous titration. Explain the types of in redox titration 2+8=10
3. Write the classification of ligands. Write the selection of complexometric titration. 2+8=10

-- -- --