2024/12

SET A

B. PHARM.
FIRST SEMESTER
PHARMACEUTICAL ANALYSIS I
BP102T [REPEAT]

[USE OMR FOR OBJECTIVE PART]

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. 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

2. 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(H_2SO_4)

3. 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

4. The difference between a measured value and true value is known as-
   a. Accuracy
   b. Precision
   c. Error
   d. Deviation

5. 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

6. Chromatography is
   a. Separation technique.
   b. Three-layer chromatography
   c. Sedimentation technique
   d. Through layer chromatography

7. API stands for
   a. Active pharmacy interpretation.
   b. Cute pulmonary interpretation.
   c. Active pharmaceutical ion.
   d. Active pharmaceutical ingredient.

8. Analytical chemistry is the study of___
   a. Identification
   b. Quantification
   c. Separation
   d. All of these

9. Which analytical technique is used for determining the number of oxidizing agents?
   a. Oxidation reduction titration
   b. Bromometry
   c. Complexometry
   d. None of these

10. 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

11. ----------is the indicator of acid base titration.
    a. Phenolphthalein
    b. Methoxide
    c. Carbon
    d. Methanol

12. How many types is there in non-aqueous titration
    a. 4
    b. 2
    c. 5
    d. 6

13. Molecular formula of perchloric acid
    a. $HclO_4$
    b. HClO
    c. $HclO_2$
    d. $HclOH_4$

14. Non aqueous titration is also called as
    a. Argentometric method
    b. Differentiating effect
    c. Levelling effect
    d. Aprotic solvents

15. Aprotic solvents are
    a. Possess low dielectric constants
    b. Possess no dielectric constants
    c. Possess high dielectric constants
    d. Possess dielectric constants

16. Levelling effects are observed under the condition of.
    a. Photophilic solvents
    b. Amphoteric
    c. Aprotic solvents
    d. Amphiprotic

17. 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

18. Indicator used in the standardization of 0.1 N $HClO_4$ is.....
    a. Methyl red
    b. Crystal violet
    c. Sodium methoxide
    d. phenolphthalein

19. GAA stands for
    a. Glacial acetic acid
    b. Glacial artificial acid
    c. Galic acetic acid
    d. Glacial acetone acid

20. Perchloric acid
    a. Oxidizing agent
    b. Non basic substance
    c. Reducing agent
    d. Alkaline solution

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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. 5
   Or
   Write a note on hydrogen ion concentration.

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**

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