

B. A-01  
09/11/2012

2023/12

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

**SET  
A**

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

**( PART-A: Objective )**

Marks : 20

*Choose the correct answer from the following:*

**1×20=20**

1. pH stands for
  - a. Negative logarithm of hydrogen ion concentration
  - b. Negative hydrogen concentration
  - c. Hydroxide ion concentration of log
  - d. Hydroxyl ion concentration of log
2. Chromatography is
  - a. Separation technique
  - b. Supportive technique
  - c. Sedimentation technique
  - d. Operative technique
3. TLC stands for
  - a. Thin layer chromatography
  - b. Three layer chromatography
  - c. Thick layer chromatography
  - d. Through layer chromatography
4. Which statement is correct?
  - a. Accuracy with precision is impossible
  - b. Accuracy and precision are same
  - c. Accuracy without precision is impossible
  - d. Accuracy with precision will give a null result
5. ----- is the primary standard for standardization of sodium hydroxide.
  - a. Sodium carbonate
  - b. Sodium chloride
  - c. Oxalic acid
  - d. Potassium dichromate
6. Electro-Analytical method also known as
  - a. Analytical separation method
  - b. Electro chemical method
  - c. Microbial method
  - d. Chemical method
7. From the following which one is act as a self-indicator
  - a.  $\text{KMnO}_4$
  - b. Methyl orange
  - c.  $\text{H}_2\text{SO}_4$
  - d. Methyl Red
8. What is the Molecular weight of NaOH
  - a. 31.511
  - b. 40.154
  - c. 45.517
  - d. 39.997
9. The process of adding known concentration until it completes the reaction is known as
  - a. Titrant
  - b. Analysis
  - c. Titrand
  - d. Titration

10. Which of the following are indeterminate error?
- |                     |                   |
|---------------------|-------------------|
| a. Instrument error | b. Personal error |
| c. Random error     | d. Chemical error |
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. $\text{HClO}_4$ | b. $\text{HClO}$    |
| c. $\text{HClO}_2$ | d. $\text{HClOH}_4$ |
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. Protophilic 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  $\text{HClO}_4$  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   |

**PART-B: Descriptive**

Time : 2 hrs. 30 min.

Marks : 35

*[ Answer any seven (7) questions ]*

1. Write the way of separation of element and properties of gravimetric analysis. 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. Explain the oxidation reduction titration curve. 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 end point determination in redox titration. Write the source of impurities in medicinal agents. 1+5+4  
=10
  
3. Write the classification of ligands and mechanism of complex formation. Explain the types of complexometric titration. 2+4+4  
=10