

(Mock Exam-2)  
B.Pharm. (First Semester)  
End Semester Examination, 2022  
Paper Second  
Pharmaceutical Analysis-I

Time: Three Hours]

[Maximum Marks: 75

Note: This question paper consist of following parts-

Part A: Attempt all 20 Multiple Choice questions (MCQ's). Each MCQ has 04 choices-A, B, C &amp; D and carries 01 mark.

20x1=20

Part B: Attempt any 02 Long answer questions out of 03 questions. Each question carries 10 marks.

02x10=20

Part C: Attempt any 07 short answer questions out of 10 questions. Each question carries 05 marks.

07x5=35

Inst: The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

**Part A**

- What is meant by the term Accuracy?  
a) The overall quality data  
b) Lack of bias in the data  
c) Level of detail at which the data is stored  
d) Extent to which a value approaches its true value
- The significant figure in 3.0840 is  
a) 4  
b) 5  
c) 3  
d) a & c
- Which one is an example of primary standard  
a) NaOH  
b)  $\text{KMnO}_4$   
c) HCl  
d)  $\text{Na}_2\text{CO}_3$
- Dithizonate complex is formed in one of the following limit test  
a) Arsenic  
b) Lead  
c) Sulphate  
d) Iron
- The phenomenon of lowering the degree of ionization of a weak electrolyte by adding a strong electrolytic solution by using one of similar ions is known as  
a) pH  
b) Common ion effect  
c) Law of mass action  
d) chemical equilibrium
- Salt of strong acid and weak base results in formation of a solution which is  
a) Neutral  
b) Acidic  
c) Basic  
d) a & c
- Example of amphiprotic solvent is  
a)  $\text{NH}_3$   
b)  $\text{CHCl}_3$   
c)  $\text{CH}_3\text{COOH}$   
d) Toulene
- Which of the following is used as titrant for estimation of weakly acidic drugs by Non aqueous Titrations?  
a)  $\text{LiOCH}_3$   
b)  $\text{HClO}_4$   
c) Benzoic acid  
d) Acetic anhydride
- The phenomenon of dispersing an insoluble material into colloid is known as  
a) Supersaturation  
b) Peptization  
c) Lyophilization  
d) Tyndal effect
- Following term is associated with sodium nitrite titrations performed amperometrically:  
a) Live stop end point  
b) Red stop end point  
c) Dead stop end point  
d) Black Platinum end point
- Brick Red precipitates are formed in one of the following precipitation titration  
a) Fajan's Method  
b) Gay Lussac Method  
c) Volhard's Method  
d) Mohr's method
- Ammonium salt of purpuric acid is  
a) Calcon  
b) Murexide  
c) Catechol violet  
d) Xylenol orange
- The gravimetric factor of Cl in AgCl is (Given: atomic mass of Ag is 107.86, Cl is 35.45)  
a) 0.2473  
b) 0.4276  
c) 0.3286  
d) 3.04
- Which of the following catalyst is used in cerimetry?  
a) Cobalt  
b) Zinc  
c) Nickel  
d) Osmium tetroxide
- In the determination of arsenic by potassium Iodate titration, the purple color produced changes to yellow due to formation of  
a)  $\text{I}_2$   
b)  $\text{ICl}$   
c)  $\text{ICl}_2$   
d)  $\text{IO}_3$
- Which of the following acid is used for the platinization of electrode of a conductivity electrode?  
a) Nitroplatinic acid  
b) Benzoplatinic acid  
c) Cloroplatinic acid  
d) Sulphoplatinic acid
- Oxygen is removed by bubbling following gas while using rotating platinum electrode.  
a) Chlorine  
b) Helium  
c) Argon  
d) Nitrogen

18. Which one of the following electrode is a reference electrode?  
a) Hydrogen electrode      b) Quinhydrone      c) Glass membrane      d) Calomel
19. Chloral hydrate is used in Complexometry as  
a) Masking agent      b) Demasking agent      c) Solvent      d) a & b
20. Fraction of the total current carried by an ion is known as  
a) Transport number      b) Hittorf number      c) Transport number      d) All of the above

### **PART B**

- Q.1 Write a note on types of errors in analysis with examples. How are they minimized?
- Q.2 Explain the Principle involved in Fajan's method and Volhards method.
- Q.3 Classify different types of Complexometric Titrations. Explain them briefly with the help of examples.

### **PART C**

- Q.1 Explain the concepts of oxidation and reduction.
- Q.2. Write a note on Mohr's Method.
- Q.3. Explain the construction and working of Dropping Mercury electrode.
- Q.4. How 0.1 M acetous Perchloric acid is prepared and standardized? Write the procedure for estimation of any weak basic drug by Non aqueous titration.
- Q.5. Differentiate between Iodimetry and Iodometry taking examples.
- Q.6. Explain the principle and procedure involved in assay of calcium gluconate powder by complexometry.
- Q.7. Explain the mechanism involved in the acid base indicators with examples.
- Q.8. Explain Nucleation and Particle growth. Selection of wash liquids is an important step in Gravimetry.  
Comment.
- Q.9. Explain the mechanism involved in the titration of primary aromatic amines by diazotization titration method.
- Q.10. Explain the Neutralization Titrations by Conductometry.