

I B. Pharmacy I Semester Supplementary Examinations, May - 2019
PHARMACEUTICAL ANALYSIS-I

Time: 3 hours

Max. Marks: 75

- Note: 1. Question paper consists of three parts (**Part-I, Part-II & Part-III**)
 2. Answer ALL (Multiple Choice) Questions from **Part-I**
 3. Answer any **TWO** Questions from **Part-II**
 4. Answer any **SEVEN** Questions from **Part-III**

PART - I

- 1 (i) Chemical analysis are affected by errors (1M)
 (a) Determinate (b) Indeterminate (c) Both a and b (d) None of the above
- (ii) 45g of oxalic acid is dissolved in 1l of water to giveN oxalic acid solution. (1M)
 (a) 0.05 (b) 0.5 (c) 5 (d) 50
- (iii) is a primary standard. (1M)
 (a) NaOH (b) HCl (c) As₂O₃ (d) Al Cl₃
- (iv) Calibration reduces errors (1M)
 (a) Human (b) Method (c) Instrumental (d) both b and c
- (v) is used as reagent in the limit test for iron. (1M)
 (a) Oxalic acid (b) formic acid (c) thioglycolic acid (d) salicylic acid
- (vi) 0.12000 hassignificant figures. (1M)
 (a) 1 (b) 3 (c) 5 (d) 6
- (vii) As per ICH guidelines, benzene is classified as solvent. (1M)
 (a) Class I (b) Class II (c) Class III (d) None of the above
- (viii) Reagent used in non-aqueous titration is (1M)
 (a) HCl (b) HClO₄ (c) NaOH (d) Oxalic acid
- (xi) Titrations with does not need any indicator (1M)
 (a) KI (b) KMnO₄ (c) K₂CrO₄ (d) KOH
- (x) is a very good masking agent for Zn²⁺ (1M)
 (a) NaCl (b) NaCN (c) NaOH (d) Na₂SO₄
- (xi) Cerimetry is generally used for estimation of (1M)
 (a) Fe (b) Zn (c) Mg (d) Ca
- (xii) The chemical reaction happening in the standardization of iodine against thiosulfate is (1M)
 (a) Precipitation (b) Neutralization (c) Oxidation/reduction (d) Complexation
- (xiii) is the weakest electrolyte (1M)
 (a) NaCl (b) CH₃COONa (c) KCl (d) CaCl₂
- (xiv) Assay of ampicillin using 0.5N NaOH is an example of titration (1M)
 (a) Weak acid vs Strong base (b) Strong acid vs weak base
 (c) Strong acid vs Strong base (d) Weak acid vs week base
- (xv) In the equation, $\Delta G^\circ = -nF E^\circ_{\text{cell}}$; F is: (1M)
 (a) Boltzmann constant (b) Faraday's constant
 (c) Gas constant (d) Universal gas constant
- (xvi) Nernst equation for an electrode is based on the variation of electrode potential of an electrode with: (1M)
 (a) Temperature only (b) Concentration of electrolyte only
 (c) Both a and b (d) Density of the electrodes

- (xvii) Polarographic cells are not sensitive to which of the following gases (1M)
(a) Carbon monoxide (b) Carbon dioxide (c) Nitrous oxide (d) Oxygen
- (xviii) Gibbs free energy change for a cell reaction is positive what does it indicates? (1M)
(a) Cell will discharge easily (b) Cell reaction is spontaneous
(c) Cell reaction is non spontaneous (d) Cell will work under standard conditions
- (xix) When the potential applied across two electrode is maintained at some constant value, the current is measures and plotted against the volume of the titrant is known as (1M)
(a) Potentiometry (b) Conductometry (c) Polarography (d) Amperometry
- (xx) The ratio of cell constant and resistance in Conductometric titration is known as (1M)
(a) EMF (b) Specific conductance (c) Standard potential (d) None of these

PART -II

2. a) Discuss the role and significance of Pharmaceutical Analysis. (5M)
b) Write a note on principles of volumetric analysis. (5M)
3. a) Write in detail on limit test for heavy metals. (6M)
b) Write in brief on indicators used in acid-base titrations. (4M)
4. a) Write a note on conductometric titration of a strong acid strong base. (5M)
b) Write in detail on assay of sodium benzoate. (5M)

PART -III

5. Write a note on determinate errors. (5M)
6. Explain the preparation and standardization of 0.1N oxalic acid solution. (5M)
7. Discuss the role of synthetic process as a source of impurity. (5M)
8. Discuss the principles of complexometry. Write its applications. (5M)
9. Write the principle, chemistry, procedure and significance of Mohr'smethod. (5M)
10. Write the steps involved in the gravimetric analysis. Write its advantages and disadvantages. (5M)
11. With a neat sketch explain the principle and working of rotating platinum electrode. (5M)
12. Write a note on indicator electrodes. (5M)
13. Write the principle, chemistry and applications of dichrometry. (5M)