

I B. Pharmacy I Semester Regular Examinations, Jan/Feb - 2018
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** Questions from **Part-I**
 3. Answer any **TWO** Questions from **Part-II**
 4. Answer any **SEVEN** Questions from **Part-III**

PART -I

1. (i) In argentometric titrations, titrant is _____ (1M)
 (a) Silver chloride (b) silver nitrate (c) sodium chloride (d) sodium nitrate
- (ii) Due to poor calibration _____ error arises. (1M)
 (a) Operational (b) Human (c) Personal (d) Instrumental
- (iii) Lewis proposed acid as species that can accept _____ (1M)
 (a) Electron pair (b) Proton pair (c) Neutron (d) None of the above
- (iv) _____ indicator method is used in redox titrations. (1M)
 (a) Internal (b) External (c) Self (d) All of above
- (v) For standardization of iodine _____ is used. (1M)
 (a) Sodium carbonate. (b) Sodium sulphate.
 (c) Sodium thiosulphate. (d) Sodium molybdate
- (vi) The strength of the acids and bases depends upon _____ (1M)
 (a) Degree of dissociation (b) Degree of saturation
 (c) both a & b (d) None of the above
- (vii) Reduction involves (1M)
 (a) loss of oxygen (b) gain in hydrogen (c) gain in oxygen (d) loss of electrons
- (viii) While Potassium Iodide (KI) is a powerful reducing agent, (1M)
 (a) iodide ion is oxidized to iodine
 (b) iodide ion is reduced to iodine
 (c) iodine is reduced to iodide ion
 (d) iodine is oxidized to iodide ion
- (ix) While Iodide ion (I⁻) oxidizes to Iodine (I₂), a change in color from colorless to (1M)
 (a) brown occurs
 (b) pink occurs
 (c) blue occurs
 (d) violet occurs
- (x) In a Redox reaction, (1M)
 (a) oxidation occurs
 (b) reduction occurs
 (c) neutralization occurs
 (d) Both A and B
- (xi) Basicity of organic acids can be determined by (1M)
 (a) Conductometry (b) Refractometry
 (c) Non-aqueous titrations (d) Complexometry

- (xii) What would be the value of E_{cell} at equilibrium? (1M)
(a) 0.58 V (b) 0.34 V (c) 0.24 V (d) 0.00 V
- (xiii) The straight line in the polarography curve is known as _____ (1M)
(a) migration current (b) residual current (c) limiting current (d) additional current
- (xiv) The main disadvantage of dropping mercury electrode is _____ (1M)
(a) surface area drop (b) Hg is toxic
(c) diffusion current varies (d) variation in the applied voltage
- (xv) Which of the following does the saturated calomel electrode contain? (1M)
(a) AgCl (b) KCl (c) HgCl₂ (d) NaCl
- (xvi) Potentiometer is used in the determination of _____ (1M)
(a) Ni (b) Thorium (c) Strontium (d) Uranium
- (xvii) In potentiometer, the current passing at the balancing point is _____ (1M)
(a) Low (b) Medium (c) High (d) Zero
- (xviii) Which of the following is the ion sensitive electrode? (1M)
(a) Hydrogen electrode (b) Saturated calomel electrode
(c) Antimony-antimony oxide electrode (d) silver-silver chloride
- (xix) Phenolphthalein changes color in _____ (1M)
(a) Acids (b) Alkalis (c) Water (d) Salt solutions
- (xx) Number of moles of solute dissolved per dm³ of solution is _____ (1M)
(a) molality (b) percentage (c) concentration (d) molarity

PART -II

2. a) Give some account on type of errors and methods of their minimization. (5M)
b) Write a note on Indian Pharmacopoea. (5M)
3. a) What are gravimetric titrations? Classify them. Write in brief on precipitation gravimetry. (5M)
b) Write the principle, procedure and applications of Fajan's method. (5M)
4. a) How do you prepare and standardize 0.1N KMnO₄ solution? (5M)
b) Write notes on Mixed indicators. (5M)

PART -III

5. Write a note on choice of indicator. (5M)
6. Write a note on Co-precipitation and post-precipitation. (5M)
7. Describe the titration curve for strong acid weak base. (5M)
8. Explain the Henderson-Hasselbalch's equation for acidic buffer. (5M)
9. Write in detail on the principle, procedure and uses of Volhard's method. (5M)
10. Write a short note on Metal ion indicators used in complexometry. (5M)
11. Write in brief on (i) accuracy (ii) Precision (5M)
12. Write in detail on limit test for heavy metals. (5M)
13. Write in detail on construction and working of Dropping mercury electrode. (5M)