

**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<sup>-</sup>) oxidizes to Iodine (I<sub>2</sub>), 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

Code No: BP102T

PCI

SET - 1

- (xii) What would be the value of  $E_{\text{cell}}$  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) HgCl<sub>2</sub> (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 dm<sup>3</sup> 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 Pharmacopoeia. (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 KMnO<sub>4</sub> 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)