

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY

LONERE - RAIGAD - 402 103

Winter Semester Examination - December - 2018

Branch: B. Pharmacy

Subject / code: Pharmaceutical Analysis -I (BP 102T)

Date: 19/12/2018

Semester: I

Marks: 75

Time: 3 Hours

Instructions: i) All questions are compulsory

ii) Figures to the right indicate full marks

iii) Draw the diagrams or flow charts wherever necessary.

Q. No. 1 Attempt the following multiple choice questions. (1 X 20=20)

- Which one the following compound is assayed by gravimetric analysis
A) ceric sulphate B) barium sulphate
C) calcium gluconate D) Benzoic acid
- Reduction is -----of electrons.
A) loss B) gain
C) removal D) none of these
- Gram-----of solute dissolved in 1 liter of solvent gives 1 Normal solution
A) equivalent Weight B) molecular Weight
C) Mole D) none of this
- From the following -----is not a self indicator?
A) ferroin B) iodine
C) potassium permanganate D) ceric sulphate
- Colour of phenolphthalein in alkaline pH is -----
A) yellow B) brown
C) pink D) red
- PH is given as-----
A) $\text{pH}=\text{Log} [\text{H}^+]$ B) $\text{pH}=-\text{Log}_{10} [\text{H}^+]$
C) $\text{pH}=1/[\text{H}^+]$ D) $\text{pH}=-\text{Log}_{10} [\text{OH}^-]$
- Drop of mercury in DME acts as-----electrode.
A) reference B) indicator
C) hydrogen D) calomel

8. -----ml of hydrochloric acid is diluted with 1 liter of water to make 1M solution.
- A) 36.5 B) 85
C) 8.5 D) 3.65
9. ----- of the following is hexadentate ligand.
- A) glycine B) ethylene diamine
C) ammonia D) EDTA
10. Solubility of precipitate is-----on addition of common ions.
- A) increased B) decreased
C) remains constant D) none of these
11. In Volhard's method -----is used as titrant.
- A) potassium chromate B) ferric ammonium sulphate
C) ammonium thiocyanate D) silver nitrate
12. According to Lewis acid is a substance which-----.
- A) accept proton B) accept electron pair
C) donate proton D) donate electron pair
13. Benzene is -----.
- A) protophilic solvent B) protogenic solvent
C) aprotic solvent D) amphiprotic solvent
14. Potential of standard hydrogen electrode is-----Volt.
- A) 0.245 B) 0.385
C) 0.199 D) 0.0
15. ----- is the requirement of primary standard substances.
- A) purity B) stability
C) no water of hydration D) all of these
16. The -----states that "The rate of chemical reaction is proportional to the active masses of reacting substances".
- A) law of mass action B) first law of thermodynamics
C) second law of thermodynamics D) universal law
17. Iodometry deals with titration of -----in chemical reaction.
- A) iodine liberated B) standard solution of iodine
C) both A and B D) none of these
18. In Potentiometry, electrode whose potential remains constant is called as -----.
- A) anode B) indicator electrode
C) reference electrode D) inert electrode

19. Current carrying capacity of ions is nothing but-----.

- A) voltage
B) conductance
C) potential difference
D) ampere

20. Ilkovic equation is given by the formula -----

- A) $607 n CD^{1/2} \cdot m^{2/3} \cdot t^{1/6}$
B) $307 n CD^{1/2} \cdot m^{2/3} \cdot t^{1/6}$
C) $700 n CD^{1/2} \cdot m^{2/3} \cdot t^{1/6}$
D) $706 n CD^{1/2} \cdot m^{2/3} \cdot t^{1/6}$

Q. No. 2 Attempt any two of the following

(10 X 2=20)

1. Explain principle of Conductometric titration and explain Conductometric titration curve with example for
 - i) Strong acid Vs strong base
 - ii) weak acid Vs strong base
 - iii) Strong acid Vs weak base
 - iv) weak acid Vs weak base
2. Describe in detail 'Theories of acid base Indicators'
3. Explain in detail various steps involved in gravimetric analysis.

Q. No. 3 Attempt any seven of the following

(5X 7=35)

1. Define Errors; explain its types and method of minimizing determinant errors.
2. Explain types of solvents used in non-aqueous titration with suitable examples.
3. How will you prepare i) 0.1N sodium hydroxide ii) 0.5 N sodium thiosulphate
4. Explain in detail principle and mechanism of diazotization titrations.
5. Differentiate between Iodimetry & Iodometry.
6. Enlist different methods of precipitation titrations. Explain mohr's method.
7. Explain concept of oxidation & reduction with example.
8. Explain principal & mechanism of metal ion indicators.
9. What is reference electrode? Write construction and working of standard hydrogen electrode.

----- END OF PAPER -----