JHARKHAND Rai University
RANCHI
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End Semester / Reappear (Semester I) Examination Dec 2022

Programme: B. Pharm **Full Marks: 75**

Course: Pharmaceutical Analysis- I **Time: 3 Hrs.**

Course Code: BP102T

Enrollment No: _____

Section I

1. **Objective type questions. Answer all questions.** **20x1=20**

i. Which one always acts as oxidizing Agent?
(A) HNO_3 (B) MnO_2 (C) H_2O_2 (D) SO_2

ii. Dissolve__gm of NaOH in 1 liter to make 0.1N NaOH
(A) 4.2 gm (B) 4.0gm (C) 40 gm (D) 0.4gm

iii. In a measurement, what is the term Used to specify the closeness of two or more measurements
(A) Precision (B) Accuracy (C) Fidelity (D) Threshold

iv. Due to poor calibration_____error arises
(A) Operational (B) Human (C) Personal (D) Instrumental

v. What is the concentration of the sulphuric Acid solution, if 100 ml of the solution is neutralised by 50? ml of 0.5 M $Ba(OH)_2$ solution
(A) 0.25 M (B) 50 M (C) 0.5 M (D) 100 M

vi. 8.5ml HCl in 1 liter solvent make
(A) 0.1M (B) 0.1N (C) 0.5M (D) Both A&B

vii. Using the normality equation normality of An unknown solute is determined By using the relation
(A) $N_1 V_1 = V_2 N_2$ (B) $V_1 V_2 = N_1 N_2$ (C) $N_1/V_2 = V_1/N_2$ (D) $N_2 = N_1 V_1/V_2$

viii. Solution present in burette is known as-
(A) Titrate (B) Titer (C) Titrant (D) solvent

ix. Which current is measured in Amperometric titrations
(A) Diffusion current (B) Kinetic current (C) Limiting current (D) Residual current

x. No. of moles of solute dissolved per Liter of the solution are called
(A) Molarity (B) Normality (C) Molality (D) Mole fraction

xi. According to Lewis theory, acid is:
(A) Electron pair donor (B) Sources of H^+ ion (C) Electron pair acceptor (D) Sources of OH^- ion

xii. Phenolphthalein has pH range
(A) 6.8-8.4 (B) 1.2-2.8 (C) 8.3-11.0 (D) 4.2-6.3

xiii. The secondary standard solution is
(A) HCI (B) Na_2C0_3 (C) Oxalic Acid (D) $KMno_4$

xiv. What is the molarity of the solution of barium hydroxide, if 35 ml of 0.1 M HCl is used in the titration of 25 ml of the barium hydroxide solution?
(A) 0.35 (B) 0.07 (C) 0.28 (D) 0.14

xv. Acetic acid is an example of_____solvent.
(A) Aprotic (B) Amphiprotic (C) Protophilic (D) Protogenic

xvi. Diazepam is Assay by which method
(A) Acid-base titration (B) Non-aqueous titration (C) Karl Fischer titration (D) NMR

xvii. An assay of boric acid is done by
(A) Direct titration (Alkalimetry) (B) Direct titration (Acidimetry)
(C) A and B (D) None

xviii. Which is an example of a Protophilic solvent
(A) H2S04 (B) KOH (C) HAC (D) Benzene

xix. Which of the following salts has no water for Crystallization
(A) Blue vitriol (B) Washing soda (C) Baking soda (D) Gypsum

xx. Which indicator gives yellow colour in basic Medium
(A) Crystal violet (B) Crystal violet (C) Oracet Blue B (D) Thymol blue

Section II

2. **Short Answer type questions. Answer any five.** **5x7=35**

a. Summaries the process to calculate the equivalent weight and molecular weight of a substance with examples.
b. Describe about indicators? Explain the theory of indicators used in acid-base titrations?
c. Explain the mechanism of action of indicators in Fajan's method
d. Give the application of the Gravimetric technique in the quantitative determination of barium as Barium sulphate
e. Write a note on iodometry
f. Explain the construction and working of silver chloride electrode
g. Write about theory of potentiometric titration

Section III

Long Answer type questions. Answer any two. **2x10= 20**

3. Define about primary and secondary standards? Give examples of primary standards used in different types of titrations. Enlist the ideal properties of the primary standard
4. Classify redox titrations. Give the applications of cerimetry and bromatometry.
5. Explain dropping mercury electrode and rotating platinum electrode.

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