

Duration: 3 Hours

Total Marks: 75

- N.B.:** 1. All questions are compulsory.
2. Figures to right indicate full marks.

Q.1 Choose the appropriate option for following multiple choice based questions. **20**

- 1 Type of Titration involved in the assay of Chlorinated lime is _____
 - a Redox Titration
 - b Acid Base Titration
 - c Formal Titration
 - d complexometric titration

- 2 Rad is _____
 - a Unit of radioactivity
 - b Unit of half life
 - c X ray contrast media
 - d Radiation

- 3 Achlorhydria is _____ in gastric secretion
 - a Increase quantity of HCl
 - b Insufficient quantity of HCl
 - c Increase quantity of NaOH
 - d Decrease quantity of NaOH

- 4 Identify the incorrect pair
 - a Expectorant : Potassium Iodide
 - b Emetic : ferrous gluconate
 - c Antacid: Magnesium Hydroxide
 - d Haematinic: Ferrous Sulphate

- 5 Which of the following is used as a contrast medium for X-ray examination of the alimentary tract.
 - a Barium Sulphate
 - b Phosphate
 - c Iodine solution
 - d Yttrium solution

- 6 In Limit test of Arsenic, reduction of Arsenious acid results into _____
 - a Arsenic acid
 - b Arsine Gas
 - c Arsenic mercury chloride complex
 - d Hydrochloric acid

- 7 Buffers are the solution prepared by mixing
 - a a strong base and salt with strong acid
 - b a weak base and salt with an weak acid
 - c a strong acid and its salt with strong base
 - d a weak acid and its salt with a strong base

- 8 The example of intracellular ion is
- Sodium
 - Potassium
 - Calcium
 - Chloride
- 9 Latest edition of IP i.e. 9th Edition is published in the year _____.
- 2023
 - 2022
 - 2020
 - 2018
- 10 Neutralising capacity of an antacid is expressed in
- mEq of NaOH
 - mEq of HCl
 - mEq of NaHCO_3
 - mEq H_2SO_4
- 11 Calculate the number of mEq of NaCl in one liter of a 0.9% w/v solution of 0.9% NaCl
- 153.8 mEq NaCl/l
 - 58.5 mEq NaCl/l
 - 585.3 mEq NaCl/l
 - 15.38 mEq NaCl/l
- 12 Which agent prevents tooth decay?
- Cleaning agent
 - Polishing agent
 - Anticaries agent
 - Dentifrices
- 13 Isotopes emitting _____ particles will decay to the element having a mass number of Four less and an atomic number of two less than the original isotope.
- alpha
 - beta
 - gamma
 - k-capture
- 14 One of the advantage of Povidine-Iodine is
- easy to apply
 - minimizes toxicity
 - greater antimicrobial effect than iodine
 - pleasant odour
- 15 which of the following is the purification method used for purification of Ammonium chloride
- Sublimation
 - extraction
 - dissolution
 - filtration

- 16 Which of the following titrant is used in the assay of Hydrogen Peroxide
- Silver Nitrate
 - Sodium Thiosulphate
 - Potassium permanganate
 - Ceric ammonium sulphate
- 17 The antacids should have buffer in the pH range
- 0 to 3
 - 7 to 8
 - 4 to 6
 - 10 to 12
- 18 Copper sulphate is also called as
- Green vitriol
 - Pink Vitriol
 - White vitriol
 - Blue vitriol
- 19 Which of the following rays can penetrate through thick metal blocks
- alpha ray
 - beta rays
 - gamma rays
 - both alpha and beta rays
- 20 Epsom salt is ____.
- Potassium Iodide
 - Magnesium sulphate
 - Ammonium chloride
 - Copper sulphate

Q.2 Long Answers (Answer any 2 out of 3)

20

[A] Write a note on the scintillation counter OR Geiger Muller counter for the measurement of radioactivity. [4M] Enlist various Units of Radioactivity. [2M] Give comparison of alpha, beta and gamma radiations [at least 4 points] [4M]

10

[B] [i] What are cathartics? Classify cathartics based on mechanism and give its significance.

04

[ii] Write the category, mechanism of action and uses of Magnesium hydroxide and Bentonite.

03

[iii] Classify and explain inorganic antimicrobial agents on the basis of the exact mechanism of action. Give one example of each category.

03

[C] [i] Define and classify expectorants with examples. Give a method of preparation and purification of Ammonium chloride. Discuss principle behind assay of Ammonium chloride.

07

[ii] Write a note on the Limit test of Iron.

03

Q.3 Short Answers (Answer 7 out of 9) 35

- [A] Write a note on Emetics. [3M] Discuss the principle involved in the assay of Copper Sulphate. [2M] **05**
- [B] What are the ideal properties of antacids? Explain the combination of antacids with suitable examples. **05**
- [C] Discuss in detail Modified limit test for Sulphate. **05**
- [D] Explain types and sources of Impurities in Pharmaceutical substances. **05**
- [E] Match the following: **05**

COLUMN A		COLUMN B	
a	Chlorinated lime	i	Hypophosphatemia
b	Sodium orthophosphate	ii	Disinfectant & Germicide
c	Ammonium chloride	iii	Saline cathartic
d	Aluminum hydroxide	iv	Antimicrobial & Antifungal
e	Potassium permanganate	v	Gastric acidifier & Expectorant

- [F] Discuss Pharmaceutical applications of Radioactive substances **05**
- [G] [i] Discuss electrolyte replacement therapy with reference to its significance and electrolytes used. **03**
- [ii] Explain the physiological role of Calcium. **02**
- [H] Which are the antidotes used for cyanide poisoning and explain their action in detail. **05**
- [I] [i] Explain buffer action with suitable examples. Give Buffer Equation. Explain terms involved in it. **03**
- [ii] Define Dentifrices. Give the role of Fluoride in dental products. **02**
