

Question Paper

Exam Date & Time: 16-May-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Instructions: Answer ALL questions.

Pharmaceutical Inorganic Chemistry [PCH 1.5T-S1]

Marks: 70

Duration: 180 mins.

Section A

Answer all the questions.

Long Answer Questions (3 x 10 marks = 30 marks)

- 1) What are errors? Explain systematic error. Explain its methods of minimization. (5)
 - a)
 - b) Explain the principle of limit test for iron and arsenic. (5)
- 2) Explain Volhard's method for the estimation of sodium chloride (5)
 - a)
 - b) Explain iodometric titration with suitable example (5)
- 3) Explain with reactions, the principle involved in the synthesis and assay of ammonium chloride. Give its uses. (5)
 - a)
 - b) How does a) oxidation b) halogenation c) Astringent action leads to antimicrobial action? Explain (5)

Section B

Answer all the questions.

Short Answer Questions (6 x 5 marks = 30 marks)

- 4) What are the complications of antacid therapy? Explain. Give the physical property and use of ammonium carbonate (5)
- 5) Explain the physiological role of Zinc. Give the physical properties and preparation of zinc sulphate (5)
- 6) Explain with reactions, the assay of sodium lactate. Explain the role of calcium carbonate in dental products. (5)
- 7) What are the applications of radiopharmaceuticals? 3 Marks
Give the uses of a) Zinc stearate b) sodium CMC 2 Marks (5)
- 8) What is gravimetric analysis? List its application and enlist the number of important techniques to get accurate, quantitative estimations in gravimetric analysis. (5)
- 9) What are indicators? Classify with example redox indicators and non- aqueous titration indicators. (5)

Section C

Answer all the questions.

Give Reasons for the Following (5 x 2 marks = 10 marks)

- 10) Why starch is not used as an indicator in the assay of potassium iodide? (2)
- 11) Why is secretion of hydrochloric acid in the stomach essential? (2)

- 12) Mordant black II suitable to use at above pH 10 and cannot be used in presence of oxidising ion. (2)
- 13) Acetic acid and acetic anhydride are used in the preparation of standard acetous perchloric acid solution. (2)
- 14) Chloride limit test for sodium bicarbonate cannot be performed by normal method. (2)

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