



**Sessional II (Odd) Semester Examination, October 2025**

Name of the Course: B. PHARM

Semester: FIRST

Name of the Paper: PHARMACEUTICAL INORGANIC CHEMISTRY

Paper Code: BP104T

Time: 1.5-hour

Roll no.....

Maximum Marks: 30

**Note:**

- (i) This question paper contains three sections.
- (ii) All the questions are compulsory.

**Section-A**

**Q1. Multiple Choice Questions – Attempt all questions**

**(10 X 1 = 10 Marks)**

**a. Ammonium chloride acts as a systemic acidifier primarily by:**

**CO-3**

- i) Liberating hydrochloric acid in the stomach
- ii) Being converted to urea in the liver
- iii) Being metabolized to urea and hydrochloric acid in the kidney
- iv) Being metabolized to urea and hydrogen chloride in the liver

**b. The ideal antacid should:**

**CO-3**

- i) Produce rapid neutralization with systemic alkalosis
- ii) Have high acid-neutralizing capacity and be non-systemic
- iii) Cause gastric acid rebound
- iv) Be highly water-insoluble to delay action

**c. The major disadvantage of sodium bicarbonate as an antacid is:**

**CO-3**

- i) It has a slow onset of action
- ii) It produces constipation
- iii) It causes systemic alkalosis and CO<sub>2</sub> release
- iv) It is poorly palatable

**d. Aluminium hydroxide gel acts as an antacid mainly by:**

**CO-3**

- i) Rapid neutralization of HCl
- ii) Physical adsorption of acid
- iii) Slow reaction forming aluminium chloride and water
- iv) Forming carbonates and releasing CO<sub>2</sub>

**e. Magnesium hydroxide mixture is often combined with aluminum hydroxide gel because:**

**CO-3**

- i) Both have synergistic acid-neutralizing effects

- ii) Aluminum causes diarrhea, magnesium causes constipation
- iii) Magnesium causes diarrhea, aluminum causes constipation
- iv) Both cause diarrhea

**f. The purgative action of magnesium sulfate is due to:**

**CO-3**

- i) Stimulation of gastric acid secretion
- ii) Osmotic retention of water in intestinal lumen
- iii) Chemical irritation of intestinal mucosa
- iv) Lubrication of fecal matter

**g. Kaolin acts therapeutically in diarrhoea mainly by:**

**CO-3**

- i) Osmotic action
- ii) Adsorbing toxins and bacteria on its surface
- iii) Increasing peristalsis
- iv) Neutralizing gastric acid

**h. The antimicrobial activity of potassium permanganate is due to:**

**CO-3**

- i) Liberation of nascent oxygen during reduction
- ii) Formation of manganese dioxide
- iii) Acidic pH in solution
- iv) Chelation with microbial enzymes

**i. Hydrogen peroxide acts as a local anti-infective primarily by:**

**CO-3**

- i) Liberating nascent hydrogen
- ii) Liberating nascent oxygen during decomposition
- iii) Lowering pH to inhibit bacterial growth
- iv) Acting as a dehydrating agent

**j. Chlorinated lime is used as a disinfectant because it:**

**CO-3**

- i) Acts as an oxidizing agent by liberating nascent chlorine
- ii) Reacts with acids to produce hydrochloric acid
- iii) Forms insoluble calcium hydroxide
- iv) Works only in alkaline medium

### Section B

**Q.2 Short Questions: Attempt any two questions**

**(2X 5 = 10 Marks)**

- a. Define and classify antacids? Discuss the preparation, assay principle and Medicinal uses of Baking soda. **CO-3**
- b. What are GIT agents? Classify them with examples. Write a note on acidifiers. **CO-3**
- c. What are gastrointestinal protectives and adsorbents. Write a short note on kaolin. **CO-3**

### Section C

**Q.3 Long questions: Attempt any one question**

**(1X10 = 10 Marks)**

- a. Enlist in detail any drug with their molecular formula, synonym (if any) method of preparation and use belongs to magnesium, aluminium and sodium-containing antacid. **CO-3**
- b. Explain the principle, reaction and procedure involved in the assay of chlorinated lime and hydrogen peroxide. **CO-3**