

Duration: 3 hours**Total marks:70**

- N.B (1) Figures on the right indicate total marks.
 (2) All questions are compulsory
 (3) Draw the diagrams wherever necessary.

Q.1. (a) Explain the following terms (Any five) [5]
 i) Laxative ii) Humectant iii) Homeostasis iv) Rem units v) Achlorhydria vi) Adsorbent

Q.1. (b) Match the following [5]

A	B
i. ORS	a. Essential trace ion
ii. Calamine	b. Diagnostic agent for measuring GFR
iii. Iodine	c. Antidote for Copper poisoning
iv. Cr ¹³¹ EDTA	d. Topical Agent
v. Penicilamine	e. Electrolyte replacement therapy

Q.1. (c) Give pharmaceutical role of the following agents (Any five) [5]
 i) Silver nitrate, ii) Hydrogen peroxide, iii) Potassium iodide, iv) Sodium Fluoride, v) Sodium nitrite, vi) Cyanocobalamin Co⁵⁷

Q.2. (a) Define buffers? Explain concept of buffer capacity and action and give one suitable example of pharmaceutical buffer. [4]

(b) Define and classify various types of anaemic conditions. Explain how oxygen can be used in certain forms of it? [4]

(c) What are topical agents? Discuss topical protectives with suitable examples. [3]

Q.3. (a) Compare and contrast different types of radiation. Also comment on their applicability in diagnosis and therapies of diseases and disorders. [4]

(b) Depict the role of following agents in dental products and give examples [4]

i) Anti-caries agents, ii) Abrasive

(c) Discuss in brief different therapies involving Electrolytes with suitable examples. [3]

OR (c) Discuss the role of iron in the body and elaborate the mechanism of iron absorption and transport in the body.

Q.4. (a) What is hardness of water? Explain its different types. Elaborate any one method to remove permanent hardness of water. [4]

(b) Write a note on any two of following [4]

i) Sclerosing agents, ii) Diluent, iii) Suspending agent, iv) Pharmaceutical water

(c) Write a note on ideal characteristics of Radiopharmaceuticals. [3]

Q.5. (a) Write a note on Aluminium hydroxide gel and Magnesium trisilicate used as antacids. [4]

(b) What are the physiological functions of potassium and phosphate? Enumerate the conditions related to their imbalances. [4]

(c) What is heavy metal poisoning? Give two examples of agents applied in such cases. [3]

Q.6. (a) Discuss various types of acid-base imbalance in human. [3]

(b) Give the mechanism of action povidone iodine and zinc oxide as antimicrobial agents. [2]

(c) Write short notes on (Any three): [6]

i) Combination Antacid therapy, ii) Emetics iii) Diagnostic uses of Tc⁹⁹, iv) Cyanide poisoning