

- N.B. (1) All questions are **compulsory**
 (2) Draw the diagrams wherever necessary.

- Q.1. (A)** Answer the following (*Any five*) 5
 i) What is achlorhydria?
 ii) Give any two pharmaceutical buffers with their pH range
 iii) Give the average daily intake of Iodine
 iv) What is BAL?
 v) Explain the role of sodium nitrite as an antidote
 vi) Give an example of an astringent

- Q.1. (B)** Match the following 5

A	B
Sodium fluoride	Principal Intracellular anion
Ammonium Carbonate	2-5 mg daily
Copper	Electrolyte
HPO_4^{2-}	Smelling Salt
NaCl	Dentifrice

- Q.1. (C)** Answer in detail 2
 i) Discuss the disadvantages of use of sodium containing antacids 3
 ii) Discuss the effects on atomic mass and atomic number by emission of α , β and γ radiation with suitable example. 3

- Q.2. (A)** Discuss the detailed mechanism of antimicrobial agents. Support your answer by giving suitable examples. 3

- (B)** Write short note (*any four*) 8
 i. Ideal properties of antacid ii. Pharmaceutical waters
 iii. Oxygen as a inhalant iv. Penicillamine in copper poisoning
 v. Role of aluminium as a protective agent

- Q.3. (A)** What are radiopharmaceuticals? Give its applications with suitable examples 4

- (B)** Write a short note on "Electrolyte replacement therapy" with suitable examples 4

- (C)** Enlist different sources of fluoride and their application to prevent tooth decay. 3

- Q.4. (A)** Classify cathartics and elaborate on saline cathartics. Give suitable examples. 4

- (B)** Write a note on (*any two*) 4

- i) adsorbents ii) antioxidant iii) suspending agent iv) lubricant

- (C)** Discuss the role of radioactive iodine as therapeutic and diagnostic agent. 3

- Q.5. (A)** Define buffers. Explain buffer action using two suitable examples 4

Or

Discuss the role of copper and manganese as an essential trace ions.

- (B)** Give mechanism of action of the following (*any four*) 4

- i) Magnesium trisilicate, ii) Ferrous fumarate, iii) Boric acid,
 iv) Povidone iodine, v) Milk of Bismuth

- (C)** What are sequestering agents? Give the structure and role of disodium EDTA. 3

- Q.6. (A)** What are protectives? Explain the role of talc and calamine as protectives. 3

- (B)** Write a note on physiological role of potassium and phosphate 2

- (C)** Explain the following terms with suitable examples (*Any three*): 6

- i) Expectorants ii) Emetics iii) Hypercalcemia iv) Systemic alkalosis