F.Y. B. Pharm
15/04/25 Sem - I

Time: 3 Hrs **Marks: 75**

Q. I Answer the following Multiple Choice Questions. Select the most appropriate option for each statement. 20M

1. Calcium gluconate is prepared from
   a Lactic acid and calcium carbonate
   b Oxalic acid and Calcium carbonate
   c Gluconic acid and Calcium hydroxide
   d Gluconic acid and Calcium carbonate
2. The first edition of Indian Pharmacopoeia was published in the year_____.
   a 2004
   b 1955
   c 1937
   d 1968
3. In the limit test of Arsenic, Arsine gas (AsH_3), when reacted with mercuric chloride paper, gives_____ stains.
   a Blue
   b Red
   c Purple
   d Yellow
4. Major intracellular anion is _____
   a Phosphate
   b Chloride
   c Bicarbonate
   d Bromide
5. Buffers are generally mixtures of
   a Strong base and its salt
   b Weak base and its salt
   c Strong base and its salt
   d Strong base and strong acid
6. Example of abrasive agent is
   a Sodium Fluoride
   b Zinc chloride
   c Stannous Fluoride
   d Calcium carbonate
7. _____is a condition characterised by abnormally high levels of potassium.
   a Hypernatremia
   b Hyperkalemia
   c Hypercalcemia
   d Hyperphosphatemia

8. _____ are used to bring about defecation.
   a Cathartics
   b Protective and adsorbents
   c Antacids
   d Astringents
9. Example of systemic antacid is
   a Magnesium Oxide
   b Aluminium Hydroxide Gel
   c Sodium Bicarbonate
   d Calcium Carbonate
10. _____are the antimicrobial agents which are used on inanimate objects.
   a Disinfectants
   b Antiseptics
   c Detergents
   d Sterilizers
11. The neutralizing capacity of an antacid is expressed in
   a ppm of HCl
   b Milliequivalents of HCl
   c ml of HCl
   d mg of HCl
12. Long term use of aluminium hydroxide antacid causes
   a Hyperphosphatemia
   b Hypokalemia
   c Hyperkalemia
   d Hypophosphatemia
13. What condition is treated with gastric acidifiers?
   a Hyperchlorhydria
   b Hypochloremia
   c Achlorhydria
   d Constipation
14. Which of the following convert haemoglobin to methaemoglobin?
   a Sodium thiosulphate
   b Activated charcoal
   c Sodium nitrite
   d Bentonite
15. Molecular formula for zinc sulphate is
   a Zn_2SO_4
   b $ZnSO_4$
   c $Zn(SO_4)_2$
   d Zn_2SO_2

16. Copper sulphate used as
   a Expectorant
   b Astringent
   c Antacid
   d Emetic
17. Which of the following is used for cyanide poisoning treatment?
   a Sodium Chloride
   b Sodium hydrogen phosphate
   c Activated charcoal
   d Sodium nitrite
18. The compounds act by stimulating the flow of respiratory tract secretions are called as
   a Emetics
   b Antidote
   c Expectorant
   d Astringent
19. Chemical species with different atomic mass number but same atomic number is called as
   a Isobar
   b Isomer
   c Isotope
   d Isoelectric
20. ------- used in the study of thyroid function
   a Uranium 92
   b Cobalt-60
   c Yttrium-90
   d Iodine-131

Q.II Attempt ANY TWO of the following. 20M

Q.1. [a] Explain the Principle, reaction , procedure involved in the Limit test of Arsenic. Discuss Gutzeit apparatus with a diagram. **10M**

[b] Discuss the method of preparation, medicinal uses and assay of sodium chloride and calcium gluconate.

Q2. Classify antimicrobials based on mechanism of action. Give category/uses, mechanism of action and assay of following inorganic compounds- hydrogen peroxide, ammonium chloride and potassium permanganate. **10M**

Q3. a. Write in brief about Pharmaceutical applications of radioactive substances. **10M**

b. Classify antidotes with suitable examples based on mechanism of action. Give the role of sodium thiosulphate and sodium nitrate in cyanide poisoning.

Q.III Attempt **ANY SEVEN out of given nine questions.** **35M**

Q1. [a] Discuss modified limit tests for chloride. [3M] **5M**

[b] Discuss the sources of impurities [2M]

Q2. [a] Explain the terms with suitable examples: Anticaries agent, dentifrices, desensitizing agents [3M] **5M**

[b] Discuss the role of fluoride in the treatment of dental caries. [2M]

Q3. [a] Define buffers and buffer capacity. Give a buffer equation for acidic buffers. [3M] **5M**

[b] Give two examples of buffers used in pharmaceutical formulations. [2M]

Q4. A patient on long term use of antacid "A" has constipation and hypophosphatemia. What is "A"? Discuss the mechanism of action of antacid "A". How can the side effects with this antacid therapy be avoided? **5M**

Q5. What are cathartics? What is the application of it? Discuss the use of magnesium salts as inorganic cathartics. What precautions should be taken when using them? **5M**

Q6. Explain Achlorhydria. Describe any two compounds used to treat achlorhydria. **5M**

Q7. Give category and uses of Potassium iodide, Antimony potassium tartarate, Ferrous gluconate, Sodium thiosulphate, Zinc sulphate **5M**

Q8. Define the following terms: **5M**

Astringent, Expectorant, Emetics, Antidote, Haematinics.

Q9. Define radioactivity and half-life. Give units of the same. Give importance to half-life in radiopharmaceuticals. **5M**

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