Pharmaceutical Chemistry–I

Chapter—1
Acid, Base & Buffer

1. **Which of the following is released when a Hydrogen atom loses an electron?**
   (a) Nucleus (b) Proton
   (c) Charge (d) Ion
2. **Which of the following is an example of amphoteric molecule?**
   (a) Acetic acid (b) Malic acid
   (c) Sugars (d) Water
3. **Acids that lose a proton easily are weak acids.**
   (a) True (b) False
4. **What is the full form of pH?**
   (a) Positive hydrogen (b) Potential Hydrogen
   (c) Positron (d) Proton of hydrogen
5. **A solution having a pH of 6 has a proton concentration of _____**
   (a) 10-6 M (b) 106 M
   (c) 6 M (d) 0.6 M
6. **What is the concentration of pure water?**
   (a) 55.51 M (b) 25.51 M
   (c) 55 M (d) 25 M
7. **In presence of an acid, amino group can be _____**
   (a) Polarized (b) Washed away
   (c) Protonated (d) Replaced
8. **Buffers react with _____ ions.**
   (a) hydrogen, hydroxyl (b) magnesium, calcium
   (c) potassium (d) sodium
9. **Buffers usually contain _____ with its conjugate _____**
   (a) weak base, base (b) strong base, acid
   (c) weak acid, base (d) weak acid, acid

10. Carbonic acid and bicarbonate ions buffer which of the following?

(a) Cytosol (b) Cytoplasm
(c) Blood (d) Lymph

11. Which of the following structures represents the conjugate acid of HPO42- ?

(a) H2PO4- (b) H3PO4
(c) H4PO4+ (d) PO43-

12. Which one of the following is equal to the pKa of a weak acid?

(a) Its relative molecular mass
(b) The pKb of its conjugate base
(c) The pH of a solution containing equal amounts of the acid and its conjugate base
(d) The equilibrium concentration of its conjugate base

13. Which of the following relationships is true for an acidic solution at 25°C?

(a) [H+] > [OH-]
(b) pH > 7.00
(c) Kw > 1 10-14
(d) The solution is negatively-charged

14. Which one of the following relationships is true in water at 25°C?

(a) [H+] = [H2O] (b) [OH-] = [H2O-]
(c) Kw > 1 10-14 (d) [H+] = [OH-]

15. A solution of HCl with a concentration of 4 10-4 mol L-1 has a pH of which of the following?

(a) 2.67 (b) 3.21
(c) 3.40 (d) 4.31

16. An aqueous solution containing a concentration of 2.5 10-8 OH- ions will have a pH of which of the following?

(a) 6.40 (b) 6.42
(c) 7.40 (d) 7.60

17. Which of the following is not an example of a weak acid?

(a) Lactic acid (b) Carbonic acid
(c) Sulfuric acid (d) Pyruvic acid

18. A buffer solution comprises which of the following?

(a) A weak acid in solution

(b) A strong acid in solution

(c) A weak base in solution

(d) A weak acid and its conjugate base in solution

19. A buffer solution contains ethanoic acid and its conjugate base; the pKa of ethanoic acid is 4.74. At what pH does the solution buffer?

(a) 3.0 (b) 4.0

(c) 5.0 (d) 6.0

20. A strong acid has a large Ka value. True or false?

(a) True (b) False

21. An amino acid can act as an acid and a base. True or false?

(a) True (b) False

22. Which of the following combinations cannot produce a buffer solution?

(a) HNO_2 and $NaNO_2$ (b) HCN and NaCN

(c) $HClO_4$ and $NaClO_4$ (d) NH_3 and $(NH_4)_2SO_4$

(e) NH_3 and NH4Br

23. What is the pH of a solution composed of 0.20 M NH3 and 0.15 M NH_4Cl?

(a) 2.15 (b) 4.62

(c) 8.26 (d) 9.38

(e) 8.89

24. If the ratio of base to acid in a buffer changes by a factor of 10, the pH of the buffer

(a) increases by 2. (b) increases by 1.

(c) decreases by 1. (d) decreases by 2.

(e) remains unchanged.

Answer Key

1. (b)	**2.** (d)	**3.** (b)	**4.** (b)	**5.** (a)	**6.** (a)
7. (c)	**8.** (a)	**9.** (c)	**10.** (c)	**11.** (a)	**12.** (c)
13. (a)	**14.** (d)	**15.** (c)	**16.** (a)	**17.** (c)	**18.** (d)
19. (c)	**20.** (a)	**21.** (a)	**22.** (c)	**23.** (d)	**24.** (b)

❑❑

Chapter—2
Antioxidants

1. ……. Are reducing agents which are added to the drugs or other pharmaceutical preparations to prevent their oxidation .

(a) Antioxidants (b) Gastrointestinal agent
(c) Astringent (d) Antimicrobial agent

2. ……. Is a chemical reaction that can produce free radicals, leading to chain reactions that may damage cells

(a) Hydrolysis
(b) Reduction
(c) Oxidation
(d) None of these

3. Antioxidants should be ……

(a) Produce desired redox reaction .
(b) Effective in low concentration .
(c) Both A & B.
(d) None of these .

4. Atmospheric air contains nearly …. of nitrogen .

(a) 78 % (b) 21 %
(c) 90 % (d) 4 %

5. The dietary Antioxidants are ……

(a) Vitamin A (b) Vitamin E
(c) Vitamin C (d) All of the above

6. Which of the following is not an antioxidants ?

(a) Sodium bisulphite (b) Sodium chloride
(c) Sodium metabisulphite (d) Sodium thiosulphite

7. Molecular formula for sodium metabisulphite ?

(a) $Na_2S_2O_5$ (b) Na_2SO_3
(c) $NaHCO_3$ (d) $Na_2S_2O^3$

8. Synonym of Hypophosphorus acid is ……

(a) Citric acid (b) Orthophosphorous acid
(c) Muriatic acid (d) Prussic acid

9. Sodium Bisulphite is having property –
(a) When crystals having sulphurousodour
(b) Freely soluble in water
(c) Aqueous solution is acidic
(d) All of these

10. What is the molecular formula of Sodium thiosulphate ?
(a) Na_2SO_3 (b) $Na_2C_4H_4O_6$
(c) $Na_2S_4O_6$ (d) $Na_2S_2O_3$

11. Sodium metabisulphite is used as ....
(a) Antioxidants (b) Food preservatives
(c) Stabilize injections (d) All of these

12. Molecular formula for Sodium nitrite ?
(a) $Na_2S_2O_5$ (b) Na_2SO_4
(c) $NaNO_2$ (d) $Na_2S_2O_3$

13. Hypophosphorus acid is prepared by mixing .... With sulphuric acid / oxalic acid .
(a) Sodium bicarbonate (b) Calcium bicarbonate
(c) Calcium hypophosphite (d) Phosphoric acid

14. Synonym of sodium nitrite is ...
(a) Salmiac
(b) Sodium salt of Nitrous acid
(c) Muriac acid
(d) Rochelle salt

15. What is the molecular formula of hypophosphorus acid ?
(a) H_3PO_2 (b) H_3PO_4
(c) H_2O_2 (d) HCO_3

16. Synonym of sodium thiosulphate is .....
() Sodium hyposulfite () Baking soda
() Precipitated chalk () Rochelle salt

17. Molecular weight of hypophosphorus acid is ...
(a) 66.0 g / mol (b) 68.1 g / mol
(c) 60.2 g / mol (d) 62.8 g / mol

18. Sulphur dioxide is prepared by .....
(a) Burning sulphur in presence of air / oxygen .
(b) Decomposition of sodium sulphite with H_2SO_4.
(c) Roasting metallic sulphides such as copper sulphide .
(d) All of these .

19. What is the property of hypophosphorus acid ?

(a) Clear yellowish liquid with slight acidic odour .
(b) Soluble in water and alcohol .
(c) Powerful reducing agent .
(d) All of these .

20. Which compound is used as a reducing bleach for papers?

(a) Sodium chloride (b) Sulphur dioxide
(c) Nitrogen (d) None of these

21. Hypophosphorus acid is incompatible with .....

(a) Strong bases (b) Oxidising agents
(c) Both A & B (d) Reducing agents

22. What is the primary component of food preservative E220 ?

(a) Sulphur dioxide (b) Sodium benzoate
(c) Sodium glutamate (d) Potassium sorbate

23. Sodium thiosulphate is prepared by boiling aqueous ..... and sulfur

(a) Sodium tetra thionate (b) Sodium hydroxide
(c) Sodium carbonate (d) All of these

24. Which of the following is the property of sulphurdioxide ?

(a) Colorless , non – inflammable gas with pungent odour
(b) Easily liquefied
(c) Both A & B
(d) Basic in nature

25. Which of the following statement is NOT correct regarding Sulphur dioxide ?

(a) It is very good reducing agent
(b) It is compatible with halogens .
(c) It decolourise the KMnO4
(d) It is used in the manufacturing of H2SO4

26. Sodium thiosulphate is used .....

(a) In treatment of cyanide poisoning .
(b) To treat dermatophytosis .
(c) As an antioxidants
(d) All of the above

27. Molecular formula for sodium sulphite ?

(a) $Na_2S_2O_5$
(b) Na_2SO_3
(c) $NaHCO_3$
(d) $Na_2S_2O_3$

28. Which of the following is the property of sodium thiosulphate ?

(a) It effloresces in dry air & deliquesces in moist air
(b) Colourless, odourless with alkaline taste .
(c) Melts at 50o C & decomposes on heated at 100o C
(d) All of the above

29. Sodium nitrite is prepared by absorbing nitrogen oxide gas by .....

(a) Nitric acid
(b) Dilute sulphuric acid
(c) Sodium carbonate solution
(d) Oxalic acid

30. Which reagent is used in qualitative testing for presence of SO_2 ?

(a) Sodium chloride (b) Potassium permagnate
(c) Iron sulfate (d) None of these

31. Sodium nitrite is incompatible with .... ?

(a) Ammonia compounds (b) Ammonia nitrates
(c) Other ammonium salts (d) All of the above

32. Which of the following statements are TRUE about sodium nitrite ?

(a) Slightly yellowish crystalline powder
(b) Molecular mass is 68.9953 g / mol
(c) Very soluble in water and hygroscopic nature
(d) All of the above

33. Synonym of sodium metabisulphite is .....

(a) Rochelle salt (b) Sodium pyrosulfite
(c) Sodium hyposulphate (d) All of these

34. Nitrogen is prepared by .....

(a) Fractional distillation of liquid air
(b) By thermal decomposition of ammonium dichromate
(c) By thermal decomposition of sodium / barium azide .
(d) All of these

35. Sodium nitrite is used as .....

(a) Food preservative
(b) Antidote in cyanide poisoning
(c) Both A & B
(d) None of these

36. Properties of nitrogen gas .....

(a) Colorless, odourless , tasteless gas
(b) It is inert gas (inactive)
(c) It can be liquefied
(d) All of these

37. Molecular weight for sodium metabisulphite is .....

(a) 190.10 g / mol (b) 90.10 g / mol
(c) 66.20 g/ mol (d) 110.10 g/mol

38. Color code for nitrogen gas storage cylinder in pharmaceutical industries is ....

(a) Black shoulder with gray body
(b) Gray shoulder with black body
(c) Red shoulder with yellow & black body
(d) White shoulder with black body

39. Nitrogen is used as ....

(a) For the packing of pharmaceuticals
(b) An antioxidants
(c) Liquid nitrogen is used in surgery to remove some tumours
(d) All of these

40. Sodium bisulphite is sued as ...

(a) Food preservatives (b) An antioxidant
(c) Both A & B (d) None of these

Answer Key

1. (a)	**2.** (c)	**3.** (c)	**4.** (a)	**5.** (d)	**6.** (b)
7. (a)	**8.** (b)	**9.** (d)	**10.** (d)	**11.** (d)	**12.** (c)
13. (c)	**14.** (b)	**15.** (a)	**16.** (a)	**17.** (a)	**18.** (d)
19. (d)	**20.** (b)	**21.** (c)	**22.** (a)	**23.** (b)	**24.** (c)
25. (b)	**26.** (d)	**27.** (c)	**28.** (d)	**29.** (c)	**30.** (b)
31. (d)	**32.** (d)	**33.** (b)	**34.** (d)	**35.** (c)	**36.** (d)
37. (a)	**38.** (a)	**39.** (d)	**40.** (c)		

❑❑

Chapter—3
Gastrointestinal Agents

1. Inorganic agent used to treat GIT agent
(a) products for altering gastric pH
(b) productives for initial inflammation
(c) adsorbents for intestinal toxins.
(d) all of the above

2. The goal of antacid therapy.
(a) ↓ Concentration of acid in gastric juice
(b) Gastic pH 3.5 and 7
(c) ↑ Concentration of acid
(d) Both (a) and (b)

3. Symptoms of achlohydria.
(a) Mild diarrhoea (b) Frequent bowel movement
(c) Epigastric pain (d) All of the above

4. Side effect of antacid therapy.
(a) Acid rebound (b) Systemic allealopsis
(c) Na content of antacid (d) All of the above

5. $Al(OH)_3$ gel is used in
(a) dentrifices (b) radioactivite agent
(c) raptic ulcan (d) all of the above

6. Calcium containing antacid differ from aluminum containing antacid
(a) depend upon their basic property
(b) do not have any amphoteric effect
(c) do not cause systemic alkalosis
(d) all of the above

7. Side effect of Ca containing antacid.
(a) Renal failure (b) Mille allkali syndromes
(c) Hyperphosphatemia (d) All of the above

8. Stimulant laxative act by
(a) local irritation of intestinal trad
(b) ↑ bulk stimulating peristalsis
(c) ↓ omatic load
(d) all of the above

9. Expectorant are used in treatment of respiratory tract by

(a) ↑ viscosity of bronchial sec
(b) ↓ viscosity of bronchial sec
(c) ↑ amount of refractory tract fluid a demulcent action is extract
(d) both (b) and (c)

10. Ammonium chloride is used as

(a) expectorant (b) diuretic
(c) systemic acidifier (d) all of the above

11. The acid neutralizing capacity of an antacid plane at least

(a) 5 meq. of HCl per dosage unit
(b) 7 meq. of HCl per dosage unit
(c) 8 meq. of HCl per dosage unit
(d) 10 meq. of HCl per dosage unit

12. Simethicone is

(a) antacid (b) defoaming agents
(c) astringents (d) none of the above

13. Dried aluminium hydroxide gel contains

(a) hydrated aluminium oxide
(b) small quantities of basic aluminiumn carbonate and bicarbonate
(c) both (a) and (b)
(d) none of the above

14. Cathartics are the drugs used to

(a) relieve acidity
(b) relieve constipation
(c) reduce gastrointestinal irritations
(d) all of the above

15. Which of the following is an example of inorganic saline expectorant?

(a) Ammonium chloride
(b) Potassium iodide
(c) Antimony potassium tartarate
(d) All of the above

16. The antioxidants action of sodium metabisulphite is due to

(a) release of sodium ions (b) release of SO_2
(c) release of O_2 (d) all of the above

17. Antacid acts by
(a) decreasing the volume of HCl in stomach
(b) neutralizing the gastric HCl contents
(c) through H/K ATPase pump
(d) all of the above

18. What should be ideal property for an antacid preparation?
(a) It should not be absorbable
(b) Not causes systemic alkalosis
(c) Should buffer in the pH range 4–6
(d) All of the above

19. Antiflatulents are generally included in antacid formulation. They act by
(a) reducing the surface tension of bubbles in the stomach
(b) avoid absorption of antacid
(c) prevent the formation of HCl
(d) all of the above

20. Saline cathartics should not be given to
(a) patients with cardiovascular disorders
(b) patients with history of convulsions
(c) patients with low sodium diet
(d) patients with muscular disorders

21. Excess use of magnesium sulphate leads to
(a) hypermagnesaemia (b) gastrointestinal irritations
(c) watery diarrhoea (d) all of the above

22. Combination of antacid are prepared because
(a) to attain synergestic effect
(b) to enhance antacid effect
(c) an attempt to balance the consti- pative effect of calcium and aluminium with the laxative effect of magnesium
(d) all of the above

23. The major side effect associated with saline cathartics is
(a) excessive loss of body fluids in form of watery stools
(b) convulsions
(c) cardiac disorder
(d) constipation

24. Burnett syndrome is associated with the prolonged uses of
(a) calcium containing antacids
(b) magnesium containing antacid
(c) aluminium containing antacid
(d) all of the above

Answers

1. (d)	**2.** (d)	**3.** (d)	**4.** (d)	**5.** (d)	**6.** (d)
7. (d)	**8.** (a)	**9.** (d)	**10.** (d)	**11.** (a)	**12.** (a)
13. (c)	**14.** (a)	**15.** (d)	**16.** (b)	**17.** (b)	**18.** (d)
19. (a)	**20.** (c)	**21.** (d)	**22.** (c)	**23.** (a)	**24.** (a)

❑❑

Chapter—4
Topical Agents

1. The agents applied to the skin and mucous membranes for local
(a) acidifying agents (b) anti oxidants
(c) topical agents (d) Gastrointestinal agents

2. The topical agents broadly categorised on the basis of there use
(a) protectives and adsorbents
(b) anti microbial agents
(c) astringents
(d) all of the above

3. Which of the following agents is the example of protective and
(a) chlorinated lime (b) sillicon polymers
(c) povidine- iodine (d) hydrogen peroxide

4. Are the topical agents tht exert their action by covering the ski
(a) protectives (b) astring/ent
(c) antimicrobial (d) antiseptic

5. Chemical formula for talc is?
(a) $Mg_3Si_4O_{10}(OH)^2$ (b) $Mg_3Si_4O_{12}(OH)^2$
(c) $Mg_3Si_4O_4(OH)^2$ (d) $Mg_3Si_4O_{10}(OH)^4$

6. Chemical formula for zinc stearate -- ?

(a) $(C_{17}H_{35}COO)^2Zn$ (b)$(C_{17}H_{35}COO)Zn$

(c) $C_{18}H_{36}CO2Zn$ (d) $C_{36}H_{70}O^2Zn$

7. Talc is used as?

(a) dusting powder

(b) lubricant and protective

(c) used as excipient & filler for tablet &pills

(d) all of the above

8. Molecular weight of zinc oxide ?

(a) 78.3gm/mol (b) 79.1gm/mol

(c) 81.4gm/mol (d) 78.7gm/mol

9. Which of the following is the property of zinc oxide ?

(a) it has a pleasant odour

(b) it is soluble in water& alcohol

(c) it is slowly absorb CO_2 from the air &forms basic zinc carbonate

(d) all of the above

10. Zinc oxide used?

(a) in various skin disease

(b) for making dental cement

(c) as a mild antiseptic & astringent

(d) all of the

11. Is Zinc oxide having a small amount of ferric oxide ?

(a) talc (b) zinc sulphate

(c) calamine (d) titanium dioxide

12. Calamine has a property as?

(a) it is a pink powder

(b) it is almost odourless & tasteless

(c) almost insoluble in water

(d) all of the above

13. Calamine is used as?

(a) topical protective

(b) mild astringent , mild antiseptic

(c) used in dusting powder, ointment & lotion

(d) all of the above

14. Which of the following is not topical agent?

(a) calamine
(b) zinc stearate
(c) sodium meta phosphate
(d) sillicon polymers

15. Sillicon polymers are generally known as.....?

(a) Alum
(b) french chalk
(c) sillicon oils
(d) mild silver protein

16. Sillicon polymers are?

(a) dimethicone
(b) simethicone
(c) polysiloxne
(d) all of the above

17. Dimethicone is?

(a) an inert sillicon, oily in nature, low surface tension
(b) used in ointments, sprays, lotion & creams
(c) forms protective layer on skin& act as water protective agent
(d) all of the above

18. Molecular weight of TIO_2 ?

(a) 79.9.gm/mol
(b) 86.12gm/mol
(c) 78.22gm/mol
(d) 81.78gm/mol

19. Which of the following statement is true about titanium dioxide

(a) it is pink & brown colour powder
(b) soluble in water& dilute mineral acids
(c) dissolves slowy in sulphuric acid & ammonium sulphate
(d) all of the above

20. Titanium dioxide is used as?

(a) used in sunscreen product
(b) act as opacifier
(c) good topical protective
(d) all of the above

Answer Key

1. (c)	**2.** (d)	**3.** (b)	**4.** (a)	**5.** (a)	**6.** (a)
7. (d)	**8.** (c)	**9.** (c)	**10.** (d)	**11.** (c)	**12.** (d)
13. (d)	**14.** (c)	**15.** (c)	**16.** (d)	**17.** (d)	**18.** (a)
19. (c)	**20.** (d)				

❑❑

Chapter—5
Antimicrobials & Astringents

1. **_____ are the substance which precipitates the protein.**
   (a) Acidifying agents (b) Antioxidants
   (c) Astringents (d) Gastrointestinal agents
2. **The chemical agents used to destroy or inhibit the growth of pathogenic micro organisms are called as_____**
   (a) Antimicrobial agents (b) Antioxidants
   (c) Astringents (d) Gastrointestinal agents
3. **_____ are the substances that are applied to non living objects to destroy microorganism that are living on the objects.**
   (a) Acidifying agents (b) Disinfectants
   (c) Astringents (d) Antiseptics
4. **_____ are the antimicrobial substances that are applied to living tissue/skin to reduce the possibility of infection.**
   (a) Acidifying agents (b) Antioxidants
   (c) Antiseptics (d) Disinfectants
5. **_____destroys all microorganisms on the surface of an article or in a fluid to prevent disease transmission associated with the use of that item.**
   (a) Sterilization (b) Antioxidants
   (c) Filteration (d) Gastrointestinal agents
6. **The agents which primarily function by inhibiting the growth of bacteria i.e, the agents do not kill but arrest the growth of bacteria.**
   (a) Bacteriostatic agents (b) Antioxidants
   (c) Astringents (d) Germicide
7. **Inorganic compound shows antimicrobial action by which of the following mechanism?**
   (a) Oxidation (b) Halogenations
   (c) Protein precipitate (d) All the above

8. Which of the following is the idol property of antimicrobial agents?

(a) Have broad spectrum of activity against bacteria, fungi, protozoa, virus, etc.
(b) Should show no systemic toxicity from topical application.
(c) Should not produce local cellular damage or should not interfere with body defense.
(d) All the above.

9. Alcohol concentration above 60% are effective against _____

(a) Bacteria (b) Fungi
(c) Germs (d) Viruses

10. How much percentage of the aqueous solution of phenol rapidly kills the vegetative cells of microorganism?

(a) 1% (b) 5%
(c) 2% (d) 10%

11. Which of the following agents irreversibly oxidize and inactive proteins with sulphahydral groups?

(a) Alcohol (b) Phenol
(c) Iodine (d) Chlorine

12. Chlorinated lime is the alternative name for

(a) calcium hypochlorite (b) sodium hypochlorite
(c) chloramines T (d) azochloramide

13. Solution of sodium hypochlorite of a 1 % concentration are used for

(a) sanitizing dairy equipment
(b) personal hygiene and a household disinfectant
(c) household bleaches
(d) disinfecting open bounds

14. Compounds capable of function as antimicrobial agent through oxidative mechanism are

(a) hydrogen peroxide (b) oxo halogen anions
(c) potassium permagnet (d) all of these

15. Astringents are the realistically used as

(a) promote healing and toughen the skin
(b) to reduce inflammation by restriction of these blood supply to the surface of mucous membranes

(c) to arrest hemorrhage by promoting coagulation of blood and constricting small capillaries
(d) all of these

16. Which of the following is the example of astringent?
(a) Aluminium chloride (b) Alum
(c) Zinc sulphate (d) All the above

17. _____ is the double salt containing potassium and aluminium sulphate.
(a) Alum (b) Boric acid
(c) Potassium permanganate (d) None of these

18. Chemical formula for alum is
(a) KAL(SO_4)2.12h2o
(b) $ZnSO_4$
(c) SeS_2
(d) $KMnO_4$

19. Properties of alum is
(a) Colorless transparent crystal having a sweet astringent taste
(b) Solouble in water but insoluble in alcohol
(c) At 200C it looses its water at crystalisation and becomes anhydrous
(d) All the above

20. Aynonyme of zinc sulphate is
(a) Flowers of sulphur (b) Chlorinated lime
(c) White vitriol (d) Alum

21. Zinc sulphate is used as
(a) Exhibit mild germicidal astringent and styptic action
(b) Internally acts as a emetic
(c) 0.25% solution is used as a eye lotion
(d) All of the above

22. What is the example of protein precipitant anti microbial agents?
(a) Silver nitrate (b) Mild silver protein
(c) Both a and b (d) None of these

23. Which of the following is the example of oxidative antimicrobial agents?
(a) Hydrogen peroxide (b) Zinc peroxide
(c) Potassium permagnate (d) All of the above

24. Which of the following anti microbial agents is classified under the category of sulphur and its compound?

(a) Sublimed sulphur (b) Selenium sulphide
(c) Precipitated sulphur (d) All the above

25. Which of the following is not a use of hydrogen peroxide

(a) Bleaching agents (b) Teardrops
(c) Antidote (d) Antiseptics

26. What is the molecular weight for potassium permanganate?

(a) 158.03 g/mol (b) 121.02 g/mol
(c) 150.01 g/mol (d) 156.04 g/mol

27. Synonyme of chlorinated lime is

(a) Bleaching powder (b) Sodium borate
(c) Laughing gas (d) Flower of sulphur

28. What is the physical property of potassium permanganate?

(a) Insoluble in water
(b) Dark purple, monoclinic prismatic crystal
(c) Tasteless and having characterstic odour
(d) All of these.

29. In which of the following hydrogen peroxide is not stored?

(a) Sodium pyrophosphate (b) Traces of alcohol
(c) Water (d) Acetanilide

30. Synonyme of sublimed sulphur is

(a) Bleaching powder (b) Sodium borate
(c) Laughing gas (d) Flowers of sulphur

31. $AgNo_3$ is categorized into_____

(a) Oxidative antimicrobial agents
(b) Halogenated anti microbial agent
(c) Protein precipitated antimicrobial agent
(d) All of the above.

32. Chemical formula of chlorinated lime is _____

(a) $Ca(ClO)_2$ (b) $Ca(HCO_3)_2$
(c) $CaCO_3$ (d) CaP_2O_7

33. Aqueous iodine solution is also called as___

(a) Aluminium iodide (b) Lugol's iodine
(c) Ringer's injection (d) Iodine tincture

34. Iodine tincture contains _____of iodine and _____of sodium iodide in much diluted alcoholic solution.

(a) 5% w/v, 10% w/v (b) 10% w/v, 6%w/v
(c) 2% w/v, 2.4% w/v (d) 2.5% w/v, 4% w/v

35. $Na_2B_4O_7.10H_2O$ is the chemical formula for

(a) Sodium potassium tartarate
(b) Boric acid
(c) Borax
(d) Sodium bisulphate

36. Mild silver protein contains not less than _____% and not more than _____% of silver?

(a) 5%, 12% (b) 19%, 23%
(c) 2.5%, 7% (d) None of these

37. Quick silver is the synonyme for

(a) Silver nitrate (b) Mild silver protein
(c) Mercury (d) Selenium sulphide

38. Potassium permanganate is used

(a) As local anti infective
(b) As mouth wash and gargle
(c) As stomach wash in treatment of narcotic drug poisioning
(d) All the above

39. 10% w/v of iodine and 6% w/v of potassium iodide in alcoholic solution is called as

(a) Strong iodine solution (b) Weak iodine solution
(c) Iodine tincture (d) Aqueous iodine solution

40. Chlorinated lime is used

(a) As disinfectant and bleaching agent
(b) Shows bactericidal action
(c) Employed for disinfecting drainages
(d) All of the above

41. H_3BO_3 is

(a) Borax (b) Boron trioxide
(c) Boric acid (d) Meta boric acid

42. Povidone iodine is also called as

(a) Lugol's iodine
(b) Polyvinylpyrrolidone or PVP*

(c) Iodine tincture
(d) All of the above

43. Which of the following statement is true about chlorinated lime

(a) It is slowly decomposing with loss of chlorine due to atmospheric CO_2 and moisture so stored in air tight container.
(b) It is compatible with ammonium salts sulfur
(c) It is insoluble in water and alcohol
(d) All of the above

44. Synonyme of borax is

(a) Sodium borate (b) Sodium tetraborate
(c) Disodium tetraborate (d) All of the above

45. Hydrogen peroxide is a

(a) Oxidizing agent
(b) Reducing agent
(c) Both reducing and oxidizing agent
(d) Neither reducing nor oxidizing agent.

46. Boric acid is used as

(a) Antiseptic (b) Insecticide
(c) Both a and b (d) Antacid

47. Physical properties of iodine is

(a) Grayish violet or bluish black in colour
(b) Bitterly pungent taste
(c) Small crystal with metallic luster
(d) All of the above

48. Uses of AgNO3

(a) Used as anti bacterial
(b) At higher concentration used as astringent
(c) Ophthalmic sol 1% is used in eye wash, 0.5% aqueous sol. For treacting burns and injuries and in wet dressings.
(d) All the above

49. _____ is used as stabilizer for aqueous solution of mild silver protein

(a) Disodium edentate(EDTA)
(b) Calcium hydroxide

(c) Silver nitrate
(d) Ammonium hydroxide

50. Mercury occurs naturally as a sulphide called as_____
(a) Yellow mercuric oxide (b) Cinnabar
(c) Ammoniated mercury (d) All of these

51. Prolonged use of mild silver may result in
(a) Darkening of skin (b) Rhinitis
(c) Tonsillitis (d) None of the above

52. Properties of mercury
(a) Shining silvery white heavy liquid and extremely mobile
(b) Insoluble in water, alcohol and soluble in nitric acid
(c) Both a and b
(d) It is involatile

53. Boric acid on heating to 100C loses one molecule of water to give
(a) Borax (b) Metaboric acid
(c) Colemanite (d) Calcium sulphite

54. Which of the following statement is not correct for yellow mercuric oxide
(a) It is orange yellow heavy amorphous powder
(b) Soluble in dil. HCL and dil. Nitric acid
(c) Chemical formula is $NH_2(Hg)Cl$
(d) On heating to red hot it decomposes into oxygen and vapour of metallic mercury

55. Chemical formula for ammonium mercury is
(a) $NH_2.HgCl$ (b) HgO
(c) $HgCl_2$ (d) $Hg(OH)_2$

56. SeS_2 is
(a) Selenium sulphide (b) Sodium thiosulphate
(c) Milk of sulphur (d) None of the above

57. Properties of precipitated sulphur is
(a) Pale greenish yellow soft powder
(b) Upon heating it burns with a blue flame
(c) Insoluble in water and alcohol
(d) All the above

58. Mandl's paint contains _____ solution of iodine in glycerine.

(a) 5%w/v (b) 2.5%w/v
(c) 3.5%w/v (d) 1.25%w/v

59. Molecular weight of mercuric oxide is

(a) 216.69 g/mol (b) 143.09 g/mol
(c) 171.78 g/mol (d) 252.10 g/mol

Answer Key

1. (c)	**2.** (a)	**3.** (b)	**4.** (c)	**5.** (a)	**6.** (a)
7. (d)	**8.** (d)	**9.** (d)	**10.** (b)	**11.** (c)	**12.** (a)
13. (b)	**14.** (d)	**15.** (d)	**16.** (d)	**17.** (a)	**18.** (a)
19. (d)	**20.** (c)	**21.** (d)	**22.** (c)	**23.** (d)	**24.** (d)
25. (b)	**26.** (a)	**27.** (a)	**28.** (d)	**29.** (c)	**30.** (d)
31. (c)	**32.** (a)	**33.** (b)	**34.** (c)	**35.** (c)	**36.** (b)
37. (c)	**38.** (d)	**39.** (a)	**40.** (d)	**41.** (c)	**42.** (b)
43. (a)	**44.** (d)	**45.** (c)	**56.** (c)	**47.** (d)	**58.** (d)
49. (a)	**50.** (b)	**51.** (a)	**42.** (c)	**53.** (b)	**54.** (c)
55. (a)	**56.** (a)	**57.** (d)	**58.** (d)	**49.** (a)	

❑❑

Chapter-6
Dental Products

1. _ _ _ _ _ is used for cleaning the surface of teeth.

(a) Dentifrices (b) Scaling
(c) Endodontic therapy (d) Desensitizing agent

2. _ _ _ _ _ _ is the process involves filling of pulp which has been decayed.

(a) Dentifrices (b) Scaling
(c) Desensitizing (d) Endodontic therapy

3. _ _ _ _ _ removes the stain from teeth.

(a) Endodontic therapy (b) Abrasives
(c) Desensitizing agents (d) None of these

4. Calcium Carbonate is an example of ----

(a) Polishing agent (b) Dentifrices
(c) Abrasives (d) All of the above

5. Root canal therapy involves ----
(a) Whitening of tooth (b) Cleaning and filling of pulp
(c) Removing of stain (d) Polishing

6. Role of fluoride in treatment of dental caries is ----
(a) Promoting remineralization
(b) Slowing down demineralization
(c) Alters the action of plaque bacteria
(d) All of the above

7. What is the molecular weight of stannous fluoride ?
(a) 156.7 (b) 154.5
(c) 150.2 (d) 155.0

8. What is the molecular weight of dibasic calcium phosphate ?
(a) 136.06 (b) 154.5
(c) 143.9 (d) 156.7

9. Sodium Metaphosphate is used as ----
(a) Reduce oral odour
(b) Polish the teeth
(c) Cleanse or deodorize the teeth & mouth
(d) All of above

10. A solution of zinc chloride 1% and zinc sulphate 2% is been used as ----
(a) Toothpaste (b) Polishing agents
(c) Whitening agents (d) Astringent mouthwash

11. Inorganic compounds used in dentistry are ----
(a) Fluorides (b) Carbonates
(c) Phosphates (d) All of the above

12. Which Vitamin is necessary for proper tooth formation ?
(a) Vitamin A (b) Vitamin C
(c) Vitamin D (d) All of the above

13. What is the role of the Stannous fluoride?
(a) Reduce plaque buildup
(b) Reduce risk of gingivitis and related bleeding
(c) Strengthen tooth enamel
(d) All of the above

14. Chemical formula for sodium monoflurophosphate is ----
(a) Na2PO3F (b) NaPO3
(c) NaF (d) NaCl2

15. The process of removal of tartar from teeth is known as ----

(a) Scaling (b) Root canal
(c) Polishing (d) Bleaching

16. Which of the following is used to prevent dental carries?

(a) Sodium fluoride (b) SMFP
(c) Stannous fluoride (d) All of the above

17. A substance which is used as polishing agent having volcanic origin?

(a) Pumice (b) Fluoride
(c) Modrells salt (d) Dicalcium phosphate

18. Chemical formula for Strontium chloride?

(a) $ZnCl_2$ (b) $SrCl_2$
(c) $NaCl_2$ (d) $NaPO_3$

19. Deficiency of Vitamin A causes?

(a) Enamel Hypoplasia (b) Bleeding of Gums
(c) Deposits of Calcium (d) Deposits of Phosphorus

20. The process of applying hydrogen peroxide solution to whiten discolored and stained tooth is known as _ _ _ _ _ .

(a) Bleaching (b) Cleansing
(c) Endodontics (d) None of these

21. Chemical formula for stannous fluoride_ _ _ _ _ .

(a) $SrCl_2$ (b) SnF_2
(c) NaF (d) $ZnCl_2$

22. _ _ _ _ _ is used in the prophylaxis of dental caries .

(a) Strontium chloride (b) Zinc chloride
(c) Sodium chloride (d) Sodium fluoride

23. The agents which reduce hypersensitivity of teeth for heat and cold are called _ _ _ _ _ .

(a) Dental fluorosis (b) Anticaries agents
(c) Desensitizing agents (d) None of the above

24. Dental tissues of tooth are ----

(a) Enamel (b) Cementum
(c) Dentine (d) All of the above

25. Which of the following is desensitizing agents ----

(a) Sodium fluoride (b) Zinc chloride
(c) Strontium chloride (d) Both B & C

26. Which of the following is role of dental anticaries agent ?
(a) Clean the accessible surface of teeth
(b) Tending to inhibit the formation of dental caries
(c) Decrease the hypersensitivity
(d) None of the above

27. Tin fluoride is synonym of ----
(a) Sodium fluoride (b) Stannous fluoride
(c) Strontium fluoride (d) Sodium chloride

28. Synonym of Zinc chloride ----
(a) Tin fluoride (b) Butter of zinc
(c) Flowers of zinc (d) None of the above

29. Fluoride percentage in water should be ----
(a) 0.1 ppm (b) 0.2 ppm
(c) 1 ppm (d) 2 ppm

30. Zinc oxide eugenol (ZOE) is used as ----
(a) Polishing Agent
(b) Used in mouthwash
(c) Dental filling material or dental cement
(d) None of these

Answer Key

1. (a)	**2.** (d)	**3.** (b)	**4.** (d)	**5.** (b)	**6.** (d)
7. (a)	**8.** (a)	**9.** (d)	**10.** (d)	**11.** (d)	**12.** (d)
13. (d)	**14.** (a)	**15.** (a)	**16.** (d)	**17.** (a)	**18.** (b)
19. (a)	**20.** (a)	**21.** (b)	**22.** (d)	**23.** (c)	**24.** (d)
25. (d)	**26.** (b)	**27.** (b)	**28.** (b)	**29.** (c)	**30.** (c)

❑❑

Chapter-7
Inhalants

1. _____are Drugs in the vapour are inhaled or administered through the respiratory system in our body
(a) Antidote (b) Inhalants
(c) Astringent (d) Antimicrobial agent

2. Molecular formula of nitrous oxide is___

(a) N_2O (b) NO_2

(c) NO_3 (d) N_2O_2

3. Nitrous oxide is also known as__

(a) Tear gas (b) Lachrymator

(c) Laughing gas (d) Mace

4. Nitrous oxide is obtained by thermal decomposition of___

(a) Ammonium Nitrate

(b) Nitrous acid

(c) Sodium nitrate

(d) Hydroxyl ammonium chloride

5. Nitrous oxide is prepared by heating a mixture of sodium nitrate and__

(a) Hyponitrous acid

(b) Ammonium sulfate

(c) Hydroxyl ammonium chloride

(d) Nitric acid

6. Molecule are weight of nitrous oxide is___

(a) 16.64 gram per mole (b) 32.08 gram per mole

(c) 44.01 gram per mole (d) 14.90 gram per mole

7. What are the properties of nitrous acid?

(a) Colourless, non toxic gas

(b) Soluble in ether and in oils

(c) Slightly metallic scent and taste

(d) All of these

8. Nitrous oxide is stored in metallic cylinder which is painted by____ colour

(a) Blue (b) Red

(c) Black (d) White

9. Which of the following statement is not true regarding nitrous oxide?

(a) Nitrous oxide is insoluble in water and alcohol

(b) it is heavier than air and can be compressed to a liquid

(c) At elevated temperature, nitrous oxide is a powerful oxidizer similar to a molecular oxygen

(d) It is not inflammable and supports combustion

10. What are the uses of nitrous oxide?

(a) General anaesthetic with mild analgesia
(b) Muscle relaxant
(c) To calm mental patients
(d) All of these

11. Oxygen occurs free in the air up to___

(a) 44% (b) 78%
(c) 21% (d) 32%

12. Molecular weight of oxygen is___

(a) 32 gram per mole (b) 44 gram per mole
(c) 10 gram per mole (d) 14 gram per mole

13. Which of the following statements is not true regarding oxygen?

(a) It supports combustion but is not inflammable
(b) it is lighter than air and good reducing agent
(c) Fractional distillation of liquefied air yields oxygen at -183 degrees Celsius
(d) It is absorbed by alkaline pyrogallol solution

14. Colour code for oxygen gas storage cylinder in pharmaceutical industries is____

(a) Black shoulder with grey body
(b) White shoulder with black body
(c) Red shoulder with yellow and black body
(d) Grey shoulder with black body

15. Deficiency of oxygen in tissues is called___

(a) Hypoxia (b) Anoxia
(c) Asphyxia (d) Anemia

16. Absence of oxygen in tissues is called___

(a) Hypoxia (b) Anoxia
(c) Asphyxia (d) Anemia

17. The condition in which more oxygen is needed termed as___

(a) Hypoxia (b) Anoxia
(c) Asphyxia (d) Anemia

18. The uses of oxygen____

(a) In carbon monoxide poisoning
(b) in treatment of hypoxia, anoxia, and asphyxia
(c) diluent for volatile and gaseous and aesthetics
(d) All of these

19. Molecular weight of carbon dioxide is___

(a) 32 gram per mole (b) 44 gram per mole
(c) 10 gram per mole (d) 14 gram per mole

20. Colour code for carbon dioxide gas storage cylinder in pharmaceutical industries is___

(a) Black shoulder (b) Brown shoulder
(c) Grey shoulder (d) Red shoulder

21. Carbon dioxide reacts with water it gives___

(a) Carbonic acid (b) Hydrogen peroxide
(c) Carbon monoxide (d) None of these

22. Greenhouse gas is___

(a) Nitrogen (b) Oxygen
(c) Carbon dioxide (d) None of these

23. What are the properties of carbon dioxide?

(a) Colourless, odourless, acidic taste
(b) Heavier than air
(c) Soluble in water
(d) Aqueous solution is acidic in nature
(e) All of these

24. Which of the following statement is not true regarding carbon dioxide?

(a) it extinguishes fire
(b) It supports combustion
(c) It can be solidified called as dry ice
(d) It is used in the preparation of soft drinks

25. Uses of carbon dioxide___

(a) Respiratory stimulant
(b) Treatment of carbon monoxide poisoning
(c) Preparation of dry ice used in minor surgery to destroy tissue
(d) Its salts are used in effervescent powders
(e) All of these

Answer Key

1. (b)	**2.** (a)	**3.** (c)	**4.** (a)	**5.** (b)	**6.** (c)
7. (d)	**8.** (a)	**9.** (a)	**10.** (d)	**11.** (c)	**12.** (a)
13. (b)	**14.** (b)	**15.** (a)	**16.** (b)	**17.** (c)	**18.** (d)
19. (b)	**20.** (c)	**21.** (a)	**22.** (c)	**23.** (d)	**24.** (b)
25. (d)					

❑❑

Chapter-8
Respiratory Stimulants

1. The drugs which are used to stimulate the respiratory system or restore the normal respiration are called as:
(a) Acidifying Agents (b) Antioxidants
(c) Respiratory Stimulants (d) GI Agents

2. Which of the followings known as the example of respiratory stimulant?
(a) Caffeine (b) Dopram
(c) Doxapram (d) All of the above

3. Chemical formula of ammonium carbonate is:
(a) $(NH4)_2CO_3$ (b) $(NH4)_2SO_4$
(c) NH_4HCO_2 (d) None of these

4. Ammonium carbonate is also known as:
(a) Taster Emetic (b) Baker's Ammonia
(c) Sal Ammoniac (d) Precipitated chalk

5. Ammonium carbonate contains variable proportion of……..
(a) Ammonium Carbonate (b) Ammonium Bicarbonate
(c) Both A & B (d) Ammonium Chloride

6. Molecular weight of ammonium carbonate is……
(a) 96.09 gm/mol (b) 90.01 gm/mol
(c) 190 gm/mol (d) 98.57 gm/mol

7. Ammonium carbonate is manufactured by subliming a mixture of ……..&……..
(a) Ammonium Sulfate, Calcium Carbonate
(b) Ammonium Chloride, Ammonium Hydroxide

(c) Ammonium Hydroxide, Sodium Hydroxide
(d) All the above

8. Properties of ammonium carbonate.....
(a) White Powder (b) Strong Odour of Ammonia
(c) Soluble in Water (d) All the above

9. Ammonium carbonate is used as.....
(a) Leavening Agent (b) Smelling Salt
(c) Emetic (d) All the above

10. Which of the following statements is not true about ammonium carbonate?
(a) On exposure to air, it decomposes into ammonia & carbon dioxide
(b) Its solutions are alkaline to litmus
(c) It is compatible with heat & moisture
(d) It is non combustible

Answer key

1. (c) **2.** (d) **3.** (a) **4.** (b) **5.** (c) **6.** (a)
7. (a) **8.** (d) **9.** (d) **10.** (c)

❑❑

Chapter-9
Expectorants & Emetics

1. The agent that promotes the discharge or expulsion of mucus from the respiratory track are known as-----
(a) Expectorants (b) Emetics
(c) Astringents (d) Antimicrobial Agents

2. Which of the following is the type of expectorant based on their MOA?
(a) Sedative (b) Stimulant
(c) Both a & b (d) None Of them

3. _____ is the stomach irritant expectorants which are able to produce their effect through stimulation of gastric reflexes?
(a) Stimulant expectorant (b) Sedative expectorant
(c) Both a & b (d) None of these

4. Which of the following is the example of sedative type of expectorant?

(a) Ammonium Chloride (b) Potassium chloride
(c) Ipecac (d) All of the above

5. _____ are the expectorants which bring about a stimulation of the secretory cells of the respiratory tract directly or indirectly?

(a) Stimulant Expectorants (b) Sedative Expectorants
(c) Both a & b (d) All of the above

6. Which of the following is the example of stimulant type of expectorant?

(a) Lemon (b) Terpine Oil
(c) Eucalyptus Oil (d) All of the above

7. _____ are the drugs which give rise to forced regurgitation(emesis) by which the contents of the stomach get expelled through the oral cavity.

(a) Emetics (b) Antacids
(c) Expectorants (d) Vometing agents

8. What is the synonym of ammonium chloride?

(a) Salmiac (b) Ammonium Muriate
(c) Sal Ammoniac (d) All of the above

9. Which of the following is not expectorant?

(a) Ondansetron (b) Potassium Iodide
(c) Antimony Potassium (d) Sodium Iodide

10. Ammonium Chloride is incompatible with _____.

(a) Lead (b) Silver Salts
(c) Alkalies (d) All of them

11. Which of the following is an example of emetic?

(a) Ammonium Chloride (b) Copper Sulphate
(c) Guaifenesin (d) Potassium Iodide

12. What is the molecular weight of ammonium chloride?

(a) 53.5 g/mol (b) 53.0 g/mol
(c) 63.0 g/mol (d) 63.5 g/mol

13. Ammonium Chloride is used as _____

(a) Expectorant (b) Diuretics
(c) Systemic Acidifier (d) All of the above

14. Ammonium Chloride is _____.

(a) Hygroscopic (b) Slightly Hygroscopic
(c) Strongly Hygroscopic (d) Non Hygroscopic

15. Which of the following is the property of Ammonium Chloride?

(a) White , fine crystalline powder
(b) Odourlress and cooling saline test
(c) Freely soluble in water but slightly soluble in alcohol
(d) All of the above

16. Synonym of potassium iodide is_____.

(a) Amichlor (b) Kali Iodide
(c) Rochelle Salt (d) Tartar Emetic

17. Potassium Iodide is used _____.

(a) As a source of Iodine
(b) As aerpectorant
(c) To treatment of hypo-thyroidism
(d) All of the above

18. Why potassium iodide is a potent reducing agent?

(a) Iodide is oxidized to iodine
(b) Iodine is reduced to iodide ion
(c) Iodide ion is reduced to iodine
(d) Iodine is oxidized to iodide ion

19. What is the molecular formula of Antimony Potassium Tartrate?

(a) $KNaC_4H_4o_6.4H_2O$ (b) $Na_2C_4H_4O6$
(c) $K_2C_4H4O_6$
(d) $K_2Sb_2(C_4H_4O_6)2.3H_2O$

20. Molecular formula of copper sulphate is _____.

(a) $CuCl_2$ (b) $Cu(NO_3)_2$
(c) $CuSO_4.H_2O$ (d) $CuCO_3$

21. Copper Sulphate Occurs in _____.

(a) Blue Color (b) Purple Color
(c) Yellow Color (d) White Color

22. Potassium Iodide is incompatible with _____.

(a) Perchloryl Fluoride (b) Bromine Trifluoride
(c) Chloral Hydrate (d) All of the above

23. Which of the following statement is TRUE about Copper Sulphate.

(a) It is insoluble in water but soluble in alcohol
(b) It is compatible with alkalies, propylene glycol
(c) It is used as ingredient in Benedicts & Fehling's reagents
(d) All of the above

24. Antimony potassium tartrate is also known as_____.

(a) Tartar emetic
(b) Potassium Antimonyl Tartrate
(c) Both a & b
(d) None of the above

25. What is the property of Antimony Potassium Tartrate?

(a) Colorless, odourless crystals having sweet taste
(b) Soluble in water but insoluble in alcohol
(c) On exposure to air, crystals effloresces
(d) All of the above

26. What is the chemical name of Rochelle salt?

(a) Antimony potassium tartrate
(b) Sodium potassium tartrate
(c) Potassium iodide
(d) Copper sulphate

27. What is the molecular formula of potassium sodium tatrate?

(a) $KNaC_4H4o_6.4H_2O$ (b) $Na_2C4H_4O_6$
(c) $K_2C_4H_4O_6$ (d) $K_2Sb_2(C_4H_4O_6)2.3H_2O$

28. Synonyms of Copper sulphate is _____

(a) Blue Vitriol (b) Blue Stone
(c) Cupric Sulphate (d) All of the above

29. Antimony potassium tartrate is used _____.

(a) As emetic
(b) In treatment of Schistosomiasis & Leishmaniasis
(c) Both a & b
(d) None of the above

30. Potassium Tatrate is used _____.

(a) As a laxative
(b) In process of silvering mirrors
(c) Ingredient of Fehling's solution
(d) All of the above

Answer Key

1. (a)	2. (c)	3. (b)	4. (d)	5. (a)	6. (d)
7. (a)	8. (d)	9. (a)	10. (d)	11. (b)	12. (a)
13. (d)	14. (a)	15. (d)	16. (b)	17. (d)	18. (a)
19. (d)	20. (c)	21. (a)	22. (d)	23. (c)	24. (c)
25. (d)	26. (b)	27. (a)	28. (d)	29. (c)	30. (d)

❑❑

Chapter-10
Antidotes

1. ..... is a substance that can contract a form of poisoning
(a) Antiodote (b) Gastrointestinal Agent
(c) Astrigent (d) Antimicrobial agent

2. Antidotes are classified in following types on the basis of their mechanism of action?
(a) Physilogical antidote (b) Chemical antidote
(c) Mechanical antidote (d) All of them

3. The antidote which prevents absorption of poison is called---
(a) Chemical antidote (b) Physilogical antidote
(c) Mechanical antidote (d) Miscellaneous antiodote

4. ..... is a mixture formerly recommended as an antidote when the exact Poisson is not known.
(a) Chemical antidote (b) Universal antidote
(c) Physical antidote (d) None of these

5. The antidote that counter of the effects of the poison by producing opposing effects?
(a) Physilogical antidote (b) Chemical antidote
(c) Mechanical antiodote (d) All of these

6. ..... is one that interact with a poison and changes its chemical nature to from a harmless substance.
(a) Physilogical antidote (b) Chemical antidote
(c) Mechanical antiodote (d) Universal antidote

7. Which of the following is the chemical antidote?
(a) Activated charcoal (b) Sodium thiosulphate
(c) Atropine (d) All of the above

8. Which of the following is used in metal poisoning?

(a) Calcium EDTA (b) Penicillamine
(c) Dimercarpol (d) All of the above

9. Which of the following is the mechanical antidote?

(a) Activated charcoal (b) Sodium thiosulphate
(c) Atropine (d) All of the above

10. Sodium thiosulphate is prepared by bolling aqeous------and sulfur.

(a) Sodium tetra tionate (b) Sodium hydoxide
(c) Sodium carbonate (d) All of the above

11. Which of the following is the physilogical antidote?

(a) Activeted charcoal (b) Sodium thiosulphate
(c) Artopine (d) All of the above

12. Synonym of sodium nitrite is----

(a) Salmiac (b) Nitrous acid sodium salt
(c) Muriac acid (d) Richelle salt

13. Which of the antidote is used for cyanide poisoning?

(a) Copper sulphate (b) Sodium nitrite
(c) Ferric oxide (d) All of the above

14. Sodium thiosulphate is used----

(a) In treatment of cynaide poisoning
(b) To treat dermatophytosis
(c) As photographic fixers
(d) All of the above

15. Sodium nitrite is prepared by absorbing nitrogen oxide gas by-----

(a) Nitric acid
(b) Dilute salphuric acid
(c) Sodium carbonate solution
(d) Oxalic acid

16. What are the side effects of activated charcoal?

(a) Constipation and black stools
(b) Nausea and vomiting
(c) Slowing or blockage of the intestinal tract
(d) All of the above

17. Sodium nitrite is incompatible with---?

(a) Ammonia compounds (b) Ammonium nitrates
(c) Other ammonium salts (d) All of the above

18. Which of the following is NOT a property of activated charcoal?

(a) It is impermeable
(b) It has many carbon atoms with free valencies
(c) It is available in granular as well as in powder
(d) It has a prolonged suspenison

19. Which of the following converts hameoglobion in to methamoglobin in order to bind cyanide?

(a) Sodium nitrite (b) Atropine
(c) Sodium thiosulphate (d) Activated charcoal

20. An antidote of iron poisoning is-----?

(a) Activated charcoal (b) Atropine
(c) Desferroxamine (d) None of these

21. Which of the following is the property of sodium thiosulphate?

(a) It effloresces in dry & deliquesces in moist air
(b) Colourless, odoueless with alkaline taste
(c) Melts at 50°C & decomposes on heated at 100°C
(d) All of the above

22. An antidote of opium and morphine poisoning is----

(a) Sodium bicarbonate (b) Atropine
(c) Permagnate of potassium (d) None of these

23. Which of the following statements are TRUE about sodium nitrite?

(a) Slightly yellowish crystalline powder
(b) Molesular mass is 68.9953g/mol
(c) Very soluble in water and hygrosopic nature
(d) All of the above

24. Which antidote is used in copper poisoning?

(a) Penicillamine (b) Dimercarpol
(c) Desferroxamine (d) Both a & b

25. What is the molecular formula of sodium thiosulphate?

(a) Na^2So^3 (b) $Na^2C^4H^4O^6$
(c) $Na^2S^4O^6$ (d) $Na^2S^2O^3$

Answer Key

1. (a)	**2.** (d)	**3.** (c)	**4.** (b)	**5.** (a)	**6.** (b)
7. (b)	**8.** (d)	**9.** (a)	**10.** (b)	**11.** (c)	**12.** (b)
13. (b)	**14.** (d)	**15.** (c)	**16.** (d)	**17.** (d)	**18.** (a)
19. (a)	**20.** (c)	**21.** (d)	**22.** (c)	**23.** (d)	**24.** (d)
25. (d)					

❑❑

Chapter-11
Major Intra & Extra Cellular Electrolytes

1. Hypochloremia can be caused by
(a) salt losing nephritis (b) metabolic acidosis
(c) both (a) and (b) (d) metabolic alkalosis

2. Condition causing hyponatremia
(a) extreme unne loss (b) metabolic acidosis
(c) addison disease (d) all the above

3. KCl is indicated in treatment of
(a) menieres syndrome
(b) antidote in digitals intoxication
(c) myastheniagravis (d) all of the above

4. Potassium therapy is contraindicated in patient
(a) impaired renal fxn (b) acute dehychation
(c) myotonia congenital (d) all of the above

5. In physiological acid-base imbalance K excretion will be decreased
(a) the amount of Na reaching distal tubule is low
(b) the proton secretion by kidney tubule is increased
(c) both (a) and (b)
(d) none of the above

6. When total K is high there is passage of proton from cells into extracellular fluid causing
(a) intracellular alkalosis (b) intracellular acidosis
(c) extracellular acidosis (d) both (a) and (b)

7. When total body K is low the intracellular fluid is acidic due to passage of protons into K depleted cell resulting in
(a) intracellular acidosis (b) extracellular alkalosis
(c) both (a) and (b) (d) intracellular alkalosis

8. In metabolic acidosis
(a) HCO_3 excess (b) CO_2 decreased
(c) HCO_3 deficit (d) all of the above

9. Condition occur in metabolic acidosis is
(a) diabetic acidosis (b) renal failure
(c) diarrhoea (d) all the above

10. When metabolic acidosis is acute, the treatment is
(a) $NaHCO_3$ (b) NaCl
(c) KCl (d) $CaCl_2$

11. In metabolic alkalosis
(a) increase HCO_3 (b) loss of H_+
(c) both (a) and (b) (d) decrease HCO_3

12. Acute metabolic alkalosis may be corrected by
(a) KCl (b) $NaHCO_3$
(c) NaCl (d) $CaCl_2$

13. In metabolic acidosis, renal function has
(a) increase acid excretion by NaH exchange
(b) increase NH_3 formation
(c) HCO_3 reabsorption (d) all of the above

14. The advantage of sodium lactate over sodium bicarbonate
(a) rapidly metabolized (b) it may be sterilized by boiling
(c) both of the above (d) none of the above

15. Replacement therapy is needed
(a) heavy loss of water (b) prolonged fever
(c) diarrhoea (d) all of the above

16. Calcium gluconate is prepared by
(a) lactic acid and $CaCO_3$ (b) oxalic acid and $CaCO_3$
(c) gluconic acid and $CaCO_3$
(d) gluconic acid and $Ca(OH)_2$

17. The category of calcium gluconate is
(a) antacid (b) calcium replenished
(c) antioxidant (d) radiopharmaceuticals

18. The category of sodium dihydrogen phosphate dehydrate is
(a) antacid (b) calcium replenisher
(c) urinary acidifier (d) respiratory stimulant

19. Sodium acetate is used as
(a) urinary acidifier (b) calcium replenisher
(c) for peritoneal dialysis fluids
(d) antioxidant

20. Which one of the followings is used as systemic alkalizer?
(a) Sodium chloride (b) Sodium bicarbonate
(c) Sodium sulphate (d) Sodium acetate

Answers

1. (c)	**2.** (d)	**3.** (d)	**4.** (d)	**5.** (c)	**6.** (d)
7. (c)	**8.** (c)	**9.** (d)	**10.** (a)	**11.** (c)	**12.** (c)
13. (d)	**14.** (c)	**15.** (d)	**16.** (c)	**17.** (b)	**18.** (c)
19. (c)	**20.** (b)				

❑❑

Chapter-12
Inorganic Official Compounds

1. Which from the followings are the official compounds of iron?
(a) Ferrous Fumarate (b) Ferrous Gluconate
(c) Iron Dextran Injection BP
(d) All the above

2. Iron compounds are incompatible with.....
(a) Mineral Acids (b) Alkali & Alkali Carbonates
(c) Tannates (d) All the above

3. Iron & its compounds undergo oxidation.
(a) True (b) False

4. How to store the iron salts?
(a) Store in airtight container
(b) In a cool place
(c) In a dark place (d) All the above

5. **Below are the uses of iron compounds.**
   (a) In iron deficiency (b) In haemorrhage condition
   (c) As haematinics (d) All the above
6. **Anaemia means.....**
   (a) Decrease in &% of HB or RBCs in the blood
   (b) Increase in the amount of HB
   (c) Increase in WBC (d) None of these
7. **Haematinic means.....**
   (a) The substances which increase the number of RBC in the blood
   (b) The substances which increase WBC
   (c) The substances which decrease the number of RBC in the blood
   (d) The substances which decrease WBC
8. **Choose the correct official compound of iodine.**
   (a) Sodium iodide (b) Potassium iodide
   (c) Both a & b (d) None of these
9. **Iodine is compatible with.....**
   (a) Oxidizing agent (b) Reducing agent
   (c) Both a & b (d) None of these
10. **Calcium compounds are stored in.....**
    (a) Air tight container (b) Light resistant container
    (c) Both a & b (d) None of these

Answer Key

1. (d) **2.** (d) **3.** (a) **4.** (d) **5.** (d) **6.** (a)
7. (a) **8.** (c) **9.** (c) **10.** (c)

❑❑

Chapter-13
Radiopharmaceuticals & Contrast Media

1. **Isotopes are having....**
   (a) Identical atomic number
   (b) Identical mass number
   (c) Identical atomic number and mass number
   (d) Identical atomic number but different mass number

2. Isobars are different element having..

(a) Identical atomic number
(b) Identical mass number
(c) Different atomic number and same mass number
(d) Identical atomic number but different mass number

3. Isotones are atomic species having..

(a) identicalatomic number
(b) identical number of neutrons but different mass number
(c) Identical atomic number and mass number
(d) Identical atomic number but different mass number

4. When alpha particle is emitted then...

(a) The atomic number decreases by 2 and mass number decreased by 4
(b) Atomic number decreased by 1 and mass number is not change
(c) There is no change in atomic and mass number
(d) None of these

5. When beta particle is emitted then....

(a) The atomic number decreases by 2 and mass number decreases by 4
(b) Atomic number is increases by 1 and mass number is not change
(c) There is no change in atomic and mass number
(d) None ofthese

6. When gamma radiation is emitted then...

(a) The atomic number decreases by 2 and mass number decreases by 4
(b) The atomic number is increased by 1 and mass number is not change
(c) There is no change in atomic and mass number
(d) None of these

7. Which type of particle is having high ionization power?

(a) Alpha particle (b) Beta particle
(c) Gamma particle (d) All of these

8. Which type of radiation having high penetration power?

(a) Alpha radiation (b) Beta radiation
(c) Gamma radiation (d) UV radiation

9. Unit of radioactivity is....

(a) Poise (b) Curie
(c) Ohm (d) All of these

10. 1 rad is equivalent to....

(a) 0.00001 j/kg (b) 0.0001 j/kg
(c) 0.001 j/kg (d) 0.01 j/ kg

11. The unit of measurement of ionizing effect of radiation by measuring damage effect on biological matter is known as.....

(a) Roentgen (b) Rad
(c) Curie (d) None of these

12. The effect of radioactive particles passing through biological tissue depends upon

(a) The energy of radiation
(b) The dose rate of radiation
(c) The ability of radiation to penetrate tissue
(d) All of these

13. The device used for measurement of radioactivity is

(a) Photographic plate method
(b) Scintillation counter (c) Proportional counter
(d) Ionization chamber (e) all of these

14. Which of the following is not a type of gas-filled detector?

(a) Proportional chamber (b) Ionization chamber
(c) GM counter (d) Semiconductor detector

15. In Geiger Muller counter, the cylinder is filled with which gas?

(a) Nitrogen gas (b) Carbon dioxide gas
(c) Argon gas (d) Helium gas

16. Biological effect of radiation are...

(a) Damage to chromosomes (b) Leukemia
(c) Ionization of nucleic acid like DNA and RNA damage the cells
(d) All of these

17. Which radioactive isotope is used as diagnostic and therapeutic agent in thyroid conditions and myxedema?

(a) I-131 (b) Cr-51
(c) Fe-59 (d) Co-57

18. Bone scanning is performed using...

(a) Co-57 (b) Cr-51
(c) Ca-44 (d) F-18

19. Gold -198 is used in the treatment of...

(a) Cancer (b) Photosynthesis
(c) Thyroid functioning (d) Anaemia

20. Which of the following is used for diagnosis of malignanttumor?

(a) Chromium- 51 (b) Phosphorus- 32
(c) Carbon- 14 (d) Iodine -125

21. Which of the following is used as radiation source for sterilization of syringe catheters etc

(a) Phosphorus-32 (b) Cobalt-60
(c) Gold-198 (d) Carbon-14

22. Which of the following is used in the diagnosis of perniciousanemia?

(a) Cyanocobalamin (b) Calcium
(c) Iodine (d) Gold

23. Which of the following radioisotopes are used to measure life span of RBCs?

(a) I-125 (b) C-14
(c) Fe-59 (d) Na-22

24. Radioactive calcium is used.....

(a) To Study bone structure
(b) Treatment of carcinoma of bone
(c) In the diagnosis of pernicious anaemia
(d) Both a and b

25. Radioactive chromium 51 is used....

(a) To study red cell mass (b) In thyroid condition
(c) In treatment of cancer (d) To measure life span of RBC

26. Which of the following radioisotopes are used to study of photosynthesis?

(a) I-125 (b) O-17
(c) Fe-69 (d) Na-22

27. Which of the following radioisotopes are used to estimation of extracellular fluid?

(a) I-125 (b) C-14
(c) Fe-59 (d) Na-22

28. The deuterium(H2) and tritium (H3) are useful to determine
(a) Carcinoma of bone (b) Total body water
(c) Thyroidism (d) Drug excretion

29. The compound having property of casing a shadow on X-Ray film is called as...
(a) Nuclei (b) Nuclear isomers
(c) Radio opaque substance (d) Isotones

30. Barium meal is a common name of
(a) Nitrous oxide (b) Barium sulphate
(c) Borax (d) Strontium chloride

31. Which of the following is used as a contrast medium for x-ray examination of alimentary tract?
(a) Barium sulphate (b) Iodine solution
(c) Sodium phosphate (d) Sodium chromate

32. Radiopaque substance are administered by
(a) Injection route (b) Oral route
(c) Rectal route (d) Both a and b

33. Ideal property of radio opaque substance
(a) It should prevent the passage of X-rays
(b) It should have high solubility
(c) It should be easily excreted from the body
(d) It should be chemically and physiological inert
(e) All of these

34. Radiopharmaceuticals are stored in
(a) Lead shielding (b) Refrigerator
(c) Ambient temperature (d) None of these

35. What precautions are to be taken in handling and storage of radio active material
(a) Never be touched with hand but handled with forceps
(b) Should be kept in remote area and fluorescence should be removed
(c) Should be proper disposal of radioactive material
(d) All of these

Answer Key

1. (d)	**2.** (c)	**3.** (b)	**4.** (a)	**5.** (b)	**6.** (c)
7. (a)	**8.** (c)	**9.** (b)	**10.** (d)	**11.** (a)	**12.** (d)

13. (e)	**14.** (c)	**15.** (c)	**16.** (d)	**17.** (a)	**18.** (d)
19. (a)	**20.** (b)	**21.** (b)	**22.** (a)	**23.** (c)	**24.** (d)
25. (a)	**26.** (b)	**27.** (d)	**28.** (b)	**29.** (c)	**30.** (b)
31. (a)	**32.** (d)	**33.** (e)	**34.** (a)	**35.** (d)	

❑❑

Chapter-14
Quality control of Drugs and pharmaceuticals

1. **Impurities in pharmaceutical preparation may be due to following sources:**
   (a) Raw Material (b) Manufacturing Process
   (c) Chemical Instability (d) All the above
2. **Apparatus used for limit test?**
   (a) Measuring Cylinder (b) Nessler Cylinder
   (c) Conical Flask (d) Test Tube
3. **This limit test is also called as Gutzeit test & requires Gutzeit apparatus.**
   (a) Limit Test of Sulphate (b) Limit Test of Heavy Metal
   (c) Limit Test of Lead (d) Limit Test of Arsenic
4. **Limit test of arsenic is based on the reaction of arsenic gas with hydrogen ion to form.....stain on mercuric chloride paper in presence of reducing agents like potassium iodide.**
   (a) Purple (b) Yellow
   (c) Green (d) Dark Brown
5. **Stannous chloride is used in limit test of arsenic due to?**
   (a) To make the solution acidic, lead acetate papers are used to trap any hydrogen sulphide which may be evolved along with arsine
   (b) To make the solution basic, lead acetate papers are used to trap arsine gas
   (c) For complete evolution of arsine zinc, potassium iodide & stannous chloride is used as a reducing agent
   (d) All of these are correct reasons

6. **What is the concentration of arsenic in arsenic standard solution use in limit test of arsenic is?**
   (a) 100 ppm As (b) 50 ppm As
   (c) 10 ppm As (d) 1 ppm As
7. **.....is based on the reaction with silver nitrate in presence of dilute nitric acid to form silver chloride, which appears as solid particles in the solution. Dilute nitric acid is used to dissolve other impurities if present.**
   (a) Limit Test of Sulphate (b) Limit Test of Chloride
   (c) Limit Test of Lead (d) Limit Test of arsenic
8. **Thioglycollic acid is used in the limit test of :**
   (a) Limit test of Iron (b) Limit test of Chloride
   (c) Limit test of Lead (d) Limit Test of Arsenic
9. **Indicator used to develop the colour at the end of process in limit test of lead is:**
   (a) Phenol Red (b) Sudan Red
   (c) Phenolphthalein (d) Starch Mucilage

Answer Key

1. (d) **2.** (b) **3.** (d) **4.** (b) **5.** (c) **6.** (c)
7. (b) **8.** (a) **9.** (a)

❑❑

Chapter-15
Identification tests

1. **Calcium salts when treated with ammonium carbonate, it gives white precipitate of-**
   (a) Calcium Carbonate (b) Calcium Chromate
   (c) Ammonium Chromate (d) Ammonium Chloride
2. **Calcium salts when treated with potassium chromate, it gives yellow crystalline precipitate of-**
   (a) Calcium Carbonate (b) Calcium Chromate
   (c) Ammonium Chromate (d) Ammonium Chloride
3. **Calcium salts when treated with ammonium oxalate, it gives white precipitate of-**
   (a) Calcium Carbonate (b) Calcium Chromate
   (c) Calcium Oxalate (d) Calcium Chloride

4. **Sodium compounds moistened with hydrochloric acid, takes on a platinum wire and ignite in the flame of a Bunsen burner, gives a ..... colour to the flame.**
   (a) White (b) Green
   (c) Red (d) Yellow
5. **Sodium salts when treated with solution of uranyl zinc acetate, gives ..... crystalline precipitate.**
   (a) Yellow (b) Red
   (c) Orange-red (d) Blue
6. **When solution of aluminium salts is treated with ....., it gives white gelatinous precipitate.**
   (a) Dil. Carbonate solution (b) Dil. Ammonium solution
   (c) Dil. Chlorine solution (d) Dil. Nitric acid
7. **When solution of zinc salts is treated with ....., it gives white precipitate.**
   (a) Ammonium sulphide (b) Hydrogen sulphide
   (c) Both a & b (d) Calcium sulphide
8. **When solution of zinc salt is treated with ferrocyanide, it gives ..... precipitate.**
   (a) Red (b) Green
   (c) Yellow (d) White
9. **When ferric and ferrous salts are treated with potassium ferricyanide, it gives ..... and ..... colour respectively.**
   (a) Reddish brown and Dark blue
   (b) Yellow and Dark Blue
   (c) Green and Dark Blue (d) White and Dark Blue
10. **Interaction between ferric salt and ammonium thiocyanate gives ..... colour.**
    (a) Brown (b) Red
    (c) Yellow (d) Green
11. **Chemical reaction between ammonium salts and sodium hydroxide causes evolution of ..... gas.**
    (a) Carbon dioxide (b) Oxygen
    (c) Ammonia (d) Sulphur Dioxide
12. **When slightly acidic solutions of ..... compounds treated with hydrogen sulphide, gives orange-red precipitate.**
    (a) Sodium (b) Calcium
    (c) Chloride (d) Antimony

13. When solution of antimony compounds react with nascent hydrogen generated by the interaction of granulated zinc & dil. Sulphuric acid, gives ..... gas.

(a) Stilbine (b) Oxygen
(c) Sulphur (d) Nitrogen

14. Solution of barium salts gives a white precipitate with .....

(a) Dil. HCl (b) Dil. H_2SO_4
(c) Dil. HNO_3 (d) Dil. H_3BO_3

15. When a solution of bismuth salt is treated with hydrogen sulphide, gives a brownish-black precipitate of.....

(a) Calcium Carbonate (b) Calcium Chromate
(c) Bismuth Sulphide (d) Bismuth Carbonate

16. When a solution of bismuth salt treated with ..... , gives a dark brown precipitate of bismuth iodide.

(a) Iodide (b) Barium iodide
(c) Sodium iodide (d) Potassium iodide

17. Acetate ions when reacts with sulphuric acid yields .....

(a) Acetic acid (b) Boric acid
(c) Sodium acetate (d) Sulphur acetate

18. Acetate ions when reacts with sulphuric acid with small quantity of alcohol yield .....

(a) Methyl acetate (b) Ethyl acetate
(c) Sodium acetate (d) Sulphur acetate

19. Neutral/slightly acidic solution of acetate when react with ..... gives deep red colour.

(a) Potassium chloride (b) Ammonium chloride
(c) Ferric chloride (d) Sodium chloride

20. Chloride ions when reacted with ..... in presence of dil. Nitric acid gives white precipitate of silver chloride.

(a) Calcium chloride (b) Silver
(c) Silver nitrite (d) Silver nitrate

21. Chloride when heated with manganese oxide and sulphuric acid ..... gas liberated.

(a) Chlorine (b) Sulphur
(c) Carbon dioxide (d) Ammonia

22. Solution of carbonates produces a brownish-red precipitate with solution of ……..

(a) Sodium chloride (b) Mercury chloride
(c) Potassium chloride (d) Calcium chloride

23. Solution of carbonates gives white precipitate with solution of ……..

(a) Silver hydroxide (b) Silver nitrite
(c) Silver nitrate (d) Silver chloride

24. When carbonate ions are treated with a solution os magnesium sulphate a …….. precipitate is formed.

(a) Green (b) Yellow
(c) Red (d) White

25. Carbonates and bicarbonates when treated with dil. Acids causes liberation of ……Gas.

(a) CO_2 (b) O_2
(c) N_2O (d) SO_2

26. Aqueous solution of bicarbonates on treated with mercuric chloride solution produces a white ppt of……

(a) Mercuric carbonate (b) Mercuric bicarbonate
(c) Ammonium carbonate (d) Calcium carbonate

27. Solution of sulphate with a barium chloride gives white precipitate of ……

(a) Calcium carbonate (b) Calcium chromate
(c) Barium sulphate (d) Barium chloride

28. Sulphates with …… Solution gives a white precipitate.

(a) Acetic acid (b) Calcium chromate
(c) Ammonium chromate (d) Lead acetate

29. Iodides when treated with …….. and manganese dioxide or potassium dichromate, evolve vapours of iodine.

(a) Sulphuric acid (b) Boric acid
(c) Nitric acid (d) Hydrochloric acid

30. Solution of iodide with a solution of silver nitrate gives a yellow curdy precipitate of ……..

(a) Nitric acid (b) Silver iodide
(c) Iodide nitrate (d) Iodine

31. Citrates and tartarates on heating with sulphuric acid in boiling water bath gives palw yellow colour and evolution of .....

(a) CO_2 (b) CO

(c) Both a & b (d) N_2O

32. Neutral solution of citrates and tartarates when boiled with ..... Gives white precipitate of calcium citrate and calcium tartarate respectively.

(a) Calcium citrate (b) Sodium chloride

(c) Ammonium chloride (d) Calcium chloride

33. Neutral solution of citrates and tartarates when treated with silver nitrate gives ..... precipitate.

(a) White (b) Green

(c) Red (d) Yellow

34. Solution of thiosulphate with ..... Give a white precipitate of sulphur.

(a) H_2SO_4 (b) HCl

(c) NH_4OH (d) NH_4Cl

35. When strong solution of thiosulphate treated with ..... gives white precipitate of barium thiosulphate.

(a) Potassium sulphate (b) Potassium chloride

(c) Barium chloride (d) Barium sulphate

Answer Key

1. (a)	**2.** (b)	**3.** (c)	**4.** (d)	**5.** (a)	**6.** (b)
7. (c)	**8.** (d)	**9.** (a)	**10.** (b)	**11.** (c)	**12.** (d)
13. (a)	**14.** (b)	**15.** (c)	**16.** (d)	**17.** (a)	**18.** (b)
19. (c)	**20.** (d)	**21.** (a)	**22.** (b)	**23.** (c)	**24.** (d)
25. (a)	**26.** (b)	**27.** (c)	**28.** (d)	**29.** (a)	**30.** (b)
31. (c)	**32.** (d)	**33.** (a)	**34.** (b)	**35.** (c)	

❑❑