

[Time: 3 Hours]

[ Marks:80]

Please check whether you have got the right question paper.

Q.1 **Attempt all multiple-choice questions** (20)

1. Assay of ferrous Sulphate is \_\_type of titration
  - a) Iodometry
  - b) Iodimetry
  - c) Cerimetry
  - d) Permagnometry
2. The species which have different atomic mass number but same atomic number is called
  - a) Isobars
  - b) Isotopes
  - c) Isomers
  - d) Nuclide
3. The compound used as supplemental therapy in iron-deficiency anemia is
  - a) White vitriol
  - b) Blue vitriol
  - c) Green vitriol
  - d) Epsom salt
4. In the assay of copper sulphate , KSCN is added to stop reaction of -----
  - a) to prevent adsorbtion of iodine on precipitate.
  - b) It reacts with KI
  - c) it converts  $Cu_2I$  to  $Cu_2I_2$
  - d) It reacts with sodium thiosulphate
5. Which GIT agents are used in the treatment of Diarrahea
  - a) Laxatives
  - b) Antacids
  - c) Protective and adsorbants
  - d) Saline Cathartics
6. Which one of the following is classified as an astringent?
  - a) Sodium potassium tartarate
  - b) Potash Alum
  - c) Potassium iodide
  - d) Calcium gluconate
7. 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  $Ca(OH)_2$

8. Sodium Iodide-131 is used for
  - a) Hyperthyroidism
  - b) Hypertension
  - c) Hyperglycemia
  - d) Hypoxia
9. Radioactive material should be handled with
  - a) Forceps
  - b) hands
  - c) Tissue paper
  - d) Spatula
10. \_\_\_\_\_ is a reducing agent used as an antidote.
  - a) Sodium thiosulphate
  - b) Sodium chloride
  - c) Ammonium chloride
  - d) Copper sulphate
11. The compound which converts haemoglobin to methaemoglobin in cyanide poisoning treatment is
  - a) Sodium thiosulphate
  - b) Sodium nitrite
  - c) Activated charcoal
  - d) Sodium nitrate
12. The ideal characteristics of an antacid are
  - a) Should be non-absorbable or do not cause systemic alkalosis
  - b) should probable inhibit pepsin
  - c) Should have buffer in the pH range of 4-6
  - d) All
13. \_\_\_\_\_ is prepared when the rock is mined
  - a) Bismuth subgallate
  - b) Bismuth subcarbonate
  - c) Kaoline
  - d) Sodium bicarbonate
14. Assay of Hydrogen peroxide is \_\_\_\_\_ type of titration
  - a) Permanganometry
  - b) Iodometry
  - c) Acid Base titration
  - d) Complexometry
15. Calculate the amount of salt necessary to make a solution that contains 163mEq/l of Na<sup>+</sup> and Cl<sup>-</sup>
  - a) 9 gm/l
  - b) 9.53 mg/l
  - c) 9000 mg/l
  - d) 9535 mg/l

16. The Chemical formula for Kaoline is  
a)  $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$   
b)  $Al_2O_3 \cdot 2SiO_2 \cdot 3H_2O$   
c)  $Al_2O_3 \cdot 2SiO_2 \cdot 5H_2O$   
d)  $Al_3O_2 \cdot 2SiO_2 \cdot 2H_2O$
17. Radioactive material should be stored in container shielded by  
a) Lead bricks  
b) Sodium bricks  
c) Iodide bricks  
d) Potassium bricks
18. Example of Desensitizer is -  
a) Zinc chloride  
b) Sodium fluoride  
c) Stannous fluoride  
d) Calcium carbonate
19. The buffer capacity is maximum when  
a) ratio [salt]/[acid] are equal to 1  
b) ratio [salt]/[acid] are less than 1  
c) ratio [salt]/[acid] are greater than 1  
d) it is mixture of strong acid and strong base
20. Which of the following compound swells in water and used as cathartic  
a) Calcium Carbonate  
b) Aluminium hydroxide  
c) Bentonite  
d) Sodium Bicarbonate

**Q.2 Attempt one question**

- i) a) Explain various sources and type of impurities in pharmaceuticals. **06**  
b) Give category, uses and mechanism of action of: sodium nitrite, sodium thiosulphate, activated charcoal. **06**
- ii) a) What are saline cathartics? Give the preparations, properties and uses of Magnesium Sulphate. **06**  
b) What are astringents? Describe properties and applications of astringents with suitable examples. **06**

**Q.3 Attempt four questions**

- i) a) Write a note on storage conditions and precautions of radioactive isotopes. **06**  
b) Write a note on Electrolytes used in Acid-base therapy **06**
- ii) a) Write the principle involved in the preparation and assay of Hydrogen peroxide **06**  
b) Write a note on preparation, purification, assay and uses of Ammonium chloride **06**

- iii) a) With the help of suitable examples, discuss the use of emetics and haematinics. **06**  
b) What are astringents? Give suitable examples and discuss applications. **06**
- iv) a) Explain Achlorhydria. Describe the agents used to treat achlorhydria. **06**  
b) Discuss Pharmaceutical applications of radioactive substances. **06**
- v) a) Write about physiological acid-base balance and its importance. Define: **06**  
Milliequivalence. Calculate the number of mEq of KCl in one liter of 1 % w/v solution.  
b) Discuss modified Limit Test for chloride and sulphate. **06**

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