n Date & Time: 31-Dec-2018 (09:30 AM - 12:30 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm First Semester- End Semester Examination 2018
PCH-BP104T: Pharmaceutical Inorganic Chemistry
Date:31/12/2018

Pharmaceutical Inorganic Chemistry [PCH-BP104T]

Marks: 75 **Duration: 180 mins.**

I Multiple Choice Questions (MCQs)

Answer all the questions. Section Duration: 30 mins

1) If the acidity increases in the blood, bicarbonate ion act as buffer by:

1) removing excess hydrogen ions from the blood
2) releasing hydrogen ions in to the blood
3) dissociating in to hydrogen ion and carbonate
4) combining with chlorides

(1)

Correct option is: 1

2) Rhodanase enzyme belongs to following one of the class of enzymes:

1) oxidoreductases 2) hydrolases 3) transferases 4) esterases

(1)

Correct option is: 3

3) Phosphate is a

1) major extracellular anion
2) major intracellular anion
3) minor extracellular anion
4) not a major electrolyte

(1)

Correct option is: 2

4) The extracellular concentration of sodium is

1) 3.5-5.5 mEq/litre
2) 30-40 mEq/litre
3) 136-148 mEq/litre
4) 50-60 mEq/litre

(1)

Correct option is: 3

5) The assay of Sodium Chloride involves the following method:

(1)

1) acid-base type of titration 2) argentometric type of titration 3) redox type of titration 4) complexometric type of titration

Correct option is: 2

6) The major source of arsenic impurity is from

1) ground water 2) containers and closures 3) raw material 4) all of the above

Correct option is: 1 (1)

7) Potassium Permanganate acts as antimicrobial by one of the following mechanism:

1) protein precipitation 2) halogenation 3) oxidation 4) nucleic acid destruction

Correct option is: 3 (1)

8) The following compound can be assayed by formal titration method:

1) Hydrogen Peroxide 2) Sodium Chloride 3) Sodium Bicarbonate 4) Ammonium Chloride

Correct option is: 4 (1)

9) Chemicals that function to minimize changes in the pH of body fluids are called:

1) inhibitors 2) activators 3) buffers 4) enzymes

Correct option is: 3 (1)

10) Phosphate buffer system mainly acts on the following area of the body:

1) renal and intracellular part 2) extracellular part 3) in the brain system 4) in erythrocytes

Correct option is: 1 (1)

11) One of the following compounds is known as systemic antacid:

1) Sodium Bicarbonate 2) Aluminium Hydroxide 3) Sodium Carbonate 4) Simethicone

Correct option is: 1 (1)

Buffer solution is required in one of the following type of titration:

1) formal titration method 2) redox titration method 3) complexometric method 4) non-aqueous method (1)

Correct option is: 3

13) Lugol's solution is known as:

1) iodine tincture 2) Aqueous Iodine solution 3) betadine solution 4) povidone-iodine solution (1)

Correct option is: 2

14) Epsom salt can be used as:

1) as a source of calcium 2) emetic 3) dentifrice 4) cathartic (1)

Correct option is: 4

15) One of the following brands is an antacid combination formulation:

1) aludrox 2) Lugol's solution 3) betadine solution 4) milk of magnesia (1)

Correct option is: 1

16) Acetate buffer is added in one of the following titration of the compounds:

1) chlorinated lime 2) ferrous sulphate 3) sodium thiosulfate 4) copper sulphate (1)

Correct option is: 4

17) Geiger-Muller counter is used to measure the

1) heat 2) light radiation 3) radioactivity 4) electrons (1)

Correct option is: 3

18) The following one of the radiation is a heaviest particle:

1) gamma radiation 2) light radiation 3) beta radiation 4) alpha radiation (1)

Correct option is: 4

19) Sodium thiosulphate is used as

1) emetic 2) cathartic 3) astringent 4) antidote

Correct option is: 4

20) Chlorinated lime can be assayed by:

1) iodimetric titration 2) iodometric titration 3) non-aqueous titration 4) precipitation titration (1)

Correct option is: 2

II Long Answers

Answer all the questions.

1) Discuss the principle with reactions, involved in the limit test for arsenic. Describe about the apparatus, with a neat diagram, used to carry out this limit test. (10)

2) Give any one example for the following categories, discuss their preparation and principle involved in their assay. (10)
a) systemic antacid b) haematinic

III Short Answers

Answer all the questions.

1) Give the principle involved in the limit test for chlorides in the given sample of sodium salicylate. Explain with equations (5)

2) Give the normal level, their location and physiological role of the following electrolytes in human body: (5)
a) chloride b) calcium

3) Give the method of preparation and principle involved in the assay of Sodium thiosulfate (5)

4) Discuss in brief the regulation of pH buffering system in blood (5)

5) Give any one example along with their molecular formula, for the following: (5)
a) astringent b) cathartic c) expectorant
d) anti-caries agent e) antidote

6) Give the diagnostic and therapeutic applications of radiopharmaceuticals (5)

7) What are hazards of radioisotopes? Mention the precautionary measures and storage conditions (5)

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