# Question Paper

Exam Date & Time: 01-Jan-2018 (09:30 AM - 12:30 PM)

## MANIPAL ACADEMY OF HIGHER EDUCATION

**MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES**
**END SEMESTER THEORY EXAMINATIONS- DECEMBER 2017 - JANUARY 2018**
**PROGRAM: MPHARM SEMESTER 1**
**DATE: 01/01/2018**
**TIME: 9:30AM - 12:30PM**

## Pharmaceutical Inorganic Chemistry [PCH-BP104T]

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

**I Multiple Choice Questions (MCQs)**

**Answer all the questions.** Section Duration: 30 mins

1) One of the following compounds is used as antiseptic in the form of eye wash (1)
Potassium Permanganate | Hydrogen Peroxide | Boric Acid | Chlorinated Lime

2) The back titration method can be used for the assay of the following compound (1)
Sodium Chloride | Calcium Gluconate | Sodium Bicarbonate | Sodium thiosulphate

3) Potassium is a (1)
major extracellular cation | major intracellular cation | minor intracellular cation | present only in plasma

4) Nitrobenzene is added in the assay of (1)
Sodium Chloride | Calcium Gluconate | Ammonium Chloride | Aluminium Hydroxide

5) The following compound is an example for systemic antacid: (1)
Magnesium Trisilicate | Magnesium Hydroxide | Sodium Bicarbonate | Aluminium Hydroxide

6) Sodium Fluoride is used as (1)
anti-caries agent | dentifrice | antacid | antimicrobial

7) Magnesium Sulphate is used as an: (1)
cathartic | dentifrice | antacid | antimicrobial

8) One of the compound is used in cyanide poisoning: (1)
potassium iodide | zinc sulphate | sodium thiosulphate | boric acid

9) The internal environment of the human body is referred to (1)
ICF | Plasma | ECF | GFR

10) Phosphate is a (1)
major extracellular anion | major intracellular anion | minor intracellular anion | present only in bones

11) Barium sulphate reagent used in the limit test for sulphates has the following composition: (1)
25%w/v $BaCl_2$, Ammonia, $K_2SO_4$ | 25%w/v $BaCl_2$, KCl, $K_2SO_4$ | 25%w/v $BaCl_2$, Alcohol, $K_2SO_4$ | 25%w/v $BaCl_2$, HCl,$K_2SO_4$

12) The following official compound is used as dentifrice (1)
Zinc Oxide | Sodium Fluoride | Calcium Carbonate | Calcium Chloride

13) The assay of Calcium Gluconate involves the following method: (1)
acid-base titration | precipitation titration | redox titration | complexometric titration

14) The extracellular concentration of potassium is (1)
3.5-5.5 mEq/litre | 10-15 mEq/litre | 130-140 mEq/litre | 50-60 mEq/litre

15) Betadine is a brand name of (1)

weak iodine solution | strong iodine solution | povidone-iodine | iodine tincture

16) Ferrous Sulphate can be assayed by the following method (1)
cerimetry method | neutralization method | complexometric method | precipitation method

17) Following are the electrolytes are important for creating action potential (1)
Na, K, Mg | Na, K, Phosphate | Na, K, Ca | Na, K, Chloride

18) The arsenious acid is converted into arsine gas by (1)
reduction reaction | oxidation reaction | complexation | hydrolysis

19) The following radiation is nothing but an electrons: (1)
alpha radiation | gamma radiation | beta radiation | x-ray

20) One of the following radiation has no mass and no charge: (1)
gamma radiation | beta radiation | alpha radiation | positrons

## II Long Answers

**Answer all the questions.**

1) a) Give the principle involved in the following limit tests: (10)
i) heavy metals ii) Iron
b) Define an impurity. What are the possible sources of impurities?

2) a) Give the normal level in blood plasma and physiological roles of the following electrolytes: (10)
a) potassium b) chlorides
b) Give the composition and uses of ORS powder.

## III Short Answers

**Answer all the questions.**

1) What are the advantages of combination therapy of antacids? Mention few brands of formulations of antacid combination. (5)

2) Write a note on Iodine and its preparations. (5)

3) Give the method of preparation, principle involved in the assay and uses of bleaching powder. (5)

4) a) What is dental caries? How fluorides help in the treatment of dental caries? (5)
b) Give the principle involved in the limit test for sulphates.

5) a) Define antidote. Give the preparation, principle involved in the assay of sodium thiosulphate. (5)
b) How sodium thiosulphate helps in the treatment of cyanide poisoning?

6) Mention pharmaceutical applications of radiopharmaceuticals. (5)

7) Give the units for the measurement of radioactivity. Discuss the working principle of Geiger Muller counter. (5)

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