UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2020

Course: Pharmaceutical Inorganic Chemistry   **Semester: I**
Program: B. Pharm.   **Time: 03 hrs.**
Course Code: BP104T   **Max. Marks: 75**
Instructions: All the sections are compulsory.

SECTION A

1. Each Question will carry 1 Marks
2. Instruction: Select the correct answer(s), Answers all the 20 questions.

S. No.	Questions	CO
Q 1	**Which one of the following salts would produce a basic solution when dissolved in water?** A) NaCN B) NH_4Cl C) KNO_3 D) $Fe(NO_3)_3$	**CO1**
Q 2	**Which electrolyte is intracellular electrolyte?** A) K+ B) Cl- C) Na+ D) Ca^{+2}	**CO1**
Q 3	**What type of fluoride is most commonly found in toothpaste?** (A) Stannous fluoride and potassium chloride. (B) Strontium chloride and potassium fluoride. (C) Sodium monofluorophosphate and sodium fluoride. (D) Potassium fluoride and sodium fluoride	**CO1**
Q 4	**Hyponatremia indicates** A) low level of potassium ion B) high level of potassium ion C) high level of chloride ion D) low level of sodium ion	**CO1**
Q 5	**Sodium hydroxide is a strong base. What is the pH of a 0.02M sodium hydroxide solution?** A) 1.7 B) 2.0 C) 12.0 D) 12.3	**CO1**
Q 6	**Example of Dentifrice is …………………………………………….** A) Calcium carbonate B) Calcium phosphate C) Sodium metaphosphate D) All of these	**CO2**
Q 7	**As the *pKa* of an acid increases, the acid will be:** A) More weaker B) More stronger C) Converted to neutral solution D) Converted to basic solution	**CO1**

Q 8	**Sleep disorder is associated with**		**CO2**
	A) magnesium deficiency	B) iron deficiency	
	C) sodium deficiency	D) none of these	
Q 9	**_____ are electromagnetic radiations with shortest wave length.**		**CO1**
	A) Alpha ray	B) Beta ray	
	C) Gamma ray	D) none of these.	
Q 10	**Tooth enamel is composed of**		**CO2**
	A) Phosphate & calcium	B) Phosphate & pottasium	
	C) sodium & calcium	D) sodium & pottasium	
Q 11	**Hydrogen peroxide acts as an antimicrobial by**		**CO2**
	A) Protein precipitation	B) Reduction	
	C) Nitration	D) Oxidation	
Q 12	**Bleaching powder is the synonym of**		**CO2**
	A) Slaked lime	B) Chlorinated lime	
	C) Caustic lime	D) none of the above	
Q 13	**Light kaolin is also known as**		**CO2**
	A) Hydrated aluminium silicate	B) Hydrated magnesium silicate	
	C) Magnesium silicate	D) All of the above	
Q 14	**Cathartics are used for the treatment of**		**CO2**
	A) Diarrhoea	B) Hypercaidity	
	C) Constipation	D) Cough	
Q 15	**Aluminium hydroxide is a**		**CO1**
	A) Weak acid	B) Weak base	
	C) Strong acid	D) Strong base	
Q 16	**Which is the example of systemic antacid?**		**CO2**
	A) Magnesium hydroxide	B) Calcium hydroxide	
	C) Sodium bicarbonate	D) Aluminium hydroxide	
Q 17	**Sodium nitrite acts as**		**CO1**
	A) Chemical antidote	B) Mechanical antidote	
	C) Physiological antidote	D) None of the above	
Q 18	**Zinc sulphate is used as an**		**CO2**
	A) Antacid	B) Astringent	
	C) Emetic	D) Expectorant	
Q 19	**Which is used as a haematinic?**		**CO1**
	A) Ferrous sulphate	B) Copper sulphate	
	C) Sodium bicarbonate	D) Sodium thiosulphate	
Q 20	**Lugol's solution is also known as**		**CO1**
	A) Weak iodine solution	B) Aqueous iodine solution	
	C) Iodine tincture	D) All of the above	

SECTION B

1. Each question will carry 10 marks. Answer any two questions out of three questions.

2. Instruction: Long Answer type questions		
Q 1	a) Write a short note on Bronsted-Lowry Concept for acids and bases. b) What is buffer capacity? c) What is the role of buffer in pharmacy? d) What is physiological buffer? e) Give two examples of physiological buffer.	**CO1**
Q 2	a) Define the term antidote & astringent. b) Write down the classification of antidote with example. c) Write down the therapeutic uses of Antidote.	**CO2**
Q 3	a) What do you mean by electrolytes? b) What are the major intracellular and extracellular electrolytes? c) Write the different functions of sodium and chloride in human body. d) What is meant by oral rehydration therapy?	**CO2**

SECTION C

1. Each question will carry 5 marks. Answer any seven questions out of nine questions
2. Instruction: Short Answers type questions

		35
Q 1	What is ORS? What is the composition of ORS as recommended by WHO?	**CO2**
Q 2	Describe the of limit test for iron.	**CO1**
Q 3	Prove that pH + pOH = 14. Calculate the pH of a buffer solution made from 0.20 mol/L $HC_2H_3O_2$ and 0.50 mol/L $C_2H_3O_2^-$. The acid dissociation constant of $HC_2H_3O_2$ is 1.8×10^{-5}.	**CO1**
Q 4	Discuss the mechanism of action of Antimicrobials.	**CO2**
Q 5	What are the different sources of pharmaceutical impurities? Explain any two of them.	**CO1**
Q 6	What do you mean by dental products? Write down the preparation and use of sodium fluoride (NaF).	**CO2**
Q 7	Write a short note on solutions of iodine.	**CO2**
Q 8	What do you mean by radiopharmaceuticals? Discuss the use of it.	**CO2**
Q 9	Write down the assay of Ammonium chloride.	**CO1**