UPES
End Semester Examination, December 2023

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
(20Qx1M=20 Marks)

S. No.		Marks	COs
Q 1	**Inorganic compounds generally do not contain_____ atoms.** a) Nitrogen b) Carbon c) Oxygen d) Sulphur	1	CO2
Q 2	**Solvay process is used for the preparation of** a) Sodium bicarbonate b) Hydrogen peroxide c) Chlorinated lime d) Aluminium hydroxide	1	CO2
Q 3	**Which one of the redox indicators is also used as a purgative?** a) Methyl orange b) Phenol red c) Phenolphthalein d) Methyl red	1	CO2
Q 4	**Washing soda is** a) Sodium carbonate b) Sodium bicarbonate c) Sodium sulphite d) Sodalimne	1	CO1
Q 5	**Achlorhydria occurs due to** a) Insufficient secretion of HCl b) Excessive secretion of HCl c) Both a and b d) Excessive secretion of Pepsin	1	CO2
Q 6	**Hydrogen peroxide is stable in** a) Acidic solution b) Alkaline solution c) Ammonia solution d) None of the above	1	CO1
Q 7	**Green vitriol is the synonym of** a) Copper sulphae b) Zinc sulphate c) Ferrous sulphate d) Aluminium sulphate	1	CO2
Q 8	**Expectorant is used for the treatment of** a) Vomiting b) Diarrhoea c) Constipation d) Cough	1	CO2
Q 9	**Iodine is readily dissolved in** a) Aqueous solution of Potassium iodide b) Water c) Aqueous solution of Sodium hydroxide d) All of the above	1	CO1
Q 10	**Sodium thiosulphate is used as an** a) Antacid b) Antimicrobial	1	CO2

	c) Antidote d) Expectorant		
Q 11	**Replacement therapy is required during _____** a) excess loss of water b) metabolic acidosis c) metabolic alkalosis d) All of these.	**1**	CO2
Q 12	**Which one of the following acids is used in the limit test for sulphur?** a) Hydrochloric acid b) Thioglycollic acid c) Nitric acid d) Barium chloride	**1**	CO1
Q 13	**The major storage of iron in body is** a) transferrin b) apoferritin c) ferritin d) none of these	**1**	CO1
Q 14	**You are presented with a solution that has a pOH of 2.13. What is the pH of this solution?** a) 2.13 b) 6.57 c) 11.87 d) None of these	**1**	CO1
Q 15	**An example of lewis base is _____** a) NH_3 b) BF_3 c) both (a) and (b) d) NaOH	**1**	CO1
Q 16	**An example of amphoteric substance is** a) $Al(OH)_3$ b) NaOH c) $Ca(OH)_2$ d) None of these	**1**	CO1
Q 17	**_____ is used to prevent dental caries.** a) Sodium chloride b) sodium fluoride c) Potassium chloride d) stannous chloride	**1**	CO2
Q 18	**What is the pH for a 0.05M solution of hydrochloric acid?** a) 1.3 b) 0.05 c) 2.7 d) 1.7	**1**	CO1
Q 19	**An example of physiological buffer is _____** a) HCl b) Hemoglobin c) NH4OH d) All of these	**1**	CO2
Q 20	**The white precipitate formed in sulphate limit test is _____** a) Ferrous sulphate b) Barium chloride c) Barium sulphate d) none of these	**1**	CO1
	SECTION B (20 Marks) **(2Qx10M=20 Marks)** **Attempt 2 Question out of 3**		
Q 1	a) Explain the difference between absorbable and non-absorbable antacids. b) Why are aluminum compounds more effective than other antacids? c) "Combinations of antacids therapy required as effective medicament."-Justify it.	**2+2+2 +4**	CO2

	d) Write a short note on milk of magnesia		
Q 2	a) How can one substance, such as water, be both an acid and a base, according to the Brønsted-Lowry definition? Explain it with examples. b) In a buffer made by mixing 0.40 moles of sodium hydrogen carbonate with 0.61 moles of sodium carbonate, how much acid can be added before the pH changes by more than 1 pH unit? c) Discuss the conditions required to get maximum buffer capacity of an acidic buffer?	3+4+3	CO2
Q 3	a) Explain the difference between laxative and purgative? b) Write down the classification of laxative with examples. c) Illustrate the mechanism of action of laxative.	2+3+5	CO1

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SECTION-C (35 Marks)
(7Qx5M=35 Marks)

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Attempt 7 Question out of 9

Q 1	Define the term emetics and expectorants with example.	5	CO2
Q 2	(a) Write the role of citric acid in the limit test of iron. (b) What do you mean by conjugate base and acid? What are the limitations of Arrhenius theory concept.	2+3	CO1
Q 3	Prove that pH + pOH = 14. Calculate the pH of a buffer solution made from 0.30 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}.	5	CO1
Q 4	What is the remedy of cyanide poisoning?	5	CO2
Q 5	Discuss different ways to determine pharmaceutical impurities.	5	CO1
Q 6	What do you mean by tooth decay? Write down the mechanism of action of sodium fluoride (NaF).	2+3	CO2
Q 7	Write a short note on ammonium hydroxide gel used as antacid.	5	CO2
Q 8	What are the pharmaceutical uses of radiopharmaceuticals? How to handle radiopharmaceuticals?	2+3	CO2
Q 9	Illustrate the physiological acid-base balance.	5	CO1

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