

VAISHALI EDUCATION POINT

(QUALITY EDUCATION PROVIDER)

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ACIDS BASES & SALTS

Class :- X

Subject :- Science

General Instructions

QNo.	Questions
1	What is the action of litmus on (i) Dry ammonia gas (ii) Solution of ammonia gas in water
2	What is 'Baking powder'? How does it make cake soft and spongy?
3	What is meant by water of crystallization in a substance? How would you show that blue CuSO_4 crystals contain water of crystallization?
4	(i) Name the raw materials used in manufacture of sodium carbonate. (ii) How can NaHCO_3 be separated from a mixture of NH_3Cl and NaHCO_3 . (iii) How is Na_2CO_3 obtained from NaHCO_3 ?
5	(i) Write the chemical equation to represent the action of atmospheric CO_2 gas and bleaching powder when left exposed in open. (ii) State for what purpose bleaching powder is used in water treatment plants. (iii) Why does bleaching powder smell of chlorine when exposed to air?
6	Which gas is usually liberated when an acid reacts with metal? Illustrate with an example. How will you test the presence of this gas?
7	Equal lengths of Mg ribbon are taken in tubes A and B. HCl is added to A and CH_3COOH is added to B. In which test tube will the fizzing occur more vigorously and why?
8	What is the common name of $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$? name a metal carbonate which is soluble in water?(2006)
9	Write the chemical equation for the reaction taking place when carbon dioxide is passed into lime water(2007)
10	Which will be more acidic and why?(2007) (a) A solution with pH value of 6.0 (b) A solution with pH value of 5.0
11	A calcium compound which is yellowish white powder is used as disinfectant and also in textile industry. Name the compound(2008)
12	Choose strong acid and strong base among CH_3COOH , NH_4OH , KOH , and HCl .(2009)
13	Name the gas evolved when dilute HCl reacts with sodium hydrogen carbonate. How is it recognised?(2011)
14	Give reasons, select a strong acid and a weak base from amongst the following substances: H_2CO_3 , HNO_3 , NaOH , NH_4OH (2006)

15	Write the chemical formula of washing soda. What happens when crystals of washing soda are exposed to air?(2007)
16	What is efflorescence? Name the compound which shows efflorescence. Support your answer with reaction(2007)
17	Crystals of a substance changed their colour on heating in a closed vessel but regained it after some time when they are allowed to cool down. Name one such substance. Explain the phenomenon involved?(2008)
18	Describe an activity to show that acids produce ions only in aqueous solutions?(2008)
19	What is the chemical formula for plaster of paris? How is it prepared? State the common and chemical names of the compound formed when plaster of paris is mixed with water?(2009)
20	Write the chemical formula for washing soda. How may it be obtained from washing soda? Name an industrial use of washing soda other than washing clothes?(2009)
21	What is the action of litmus on (1) dry ammonia gas (2) solution of ammonia gas in water(2010)
22	An aqueous solution has a pH value of 7.0. is this solution acidic, basic or neutral(2010)
23	The pH values of four different liquids are: 7.0, 14.0, 4.0, 2.0. which of these could be that of (a) Lemon juice (b) distilled water (c) 1M sodium hydroxide solution (d) tomato juice(2010)
24	Name the gas evolved when dilute sulphuric acid reacts with sodium carbonate. Write the chemical reaction for the reaction involved?(2011)
25	What happens when crystals of washing soda is left open in dry air? What is this change named as? Name two industries based on use of washing soda.(2011)
26	How is plaster of paris prepared from gypsum? How may be they interconverted? Write one use of plaster of paris?(2011)
27	Write the chemical formula of bleaching powder? How is it manufactured? Give two important uses of bleaching powder?(2007)
28	(a) name the raw material used in manufacture of sodium carbonate (b) How can sodium hydrogen carbonate be separated from mixture of NH_4Cl and NaHCO_3 (c) How is sodium carbonate obtained from sodium hydrogen carbonate (2008)
29	(a) Write the chemical formula and name of bleaching powder (b) Why does bleaching powder smell of chlorine when exposed to air (c) Write chemical equation to represent action of dilute hydrochloric acid on bleaching powder (2009)
30	(a) Write the chemical equation to represent the action of atmospheric CO_2 gas and bleaching powder when left exposed in open (b) state for what purpose is bleaching powder used in water treatment plants?(2010)
31	State the chemical property in each case on which of the following uses of baking

	soda are based: (a) as an antacid (b) as a constituent of baking powder(2011)
32	Baking soda is used in small amount in making bread and cake. It helps to make these soft and spongy. An aqueous solution of baking soda turns red litmus blue. It is used in soda acid fire extinguisher Use this information to answer the following questions (a) How does baking soda helps to make cake soft and spongy (b) How does it help in extinguishing fires (c) Is the pH value of baking soda solution lesser than or greater than 7?(2011)
33	Dry hydrogen chloride gas does not turn blue litmus whereas hydrochloric acid does. Give one reason.
34	Why is Plaster of Paris written as $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$?
35	While diluting the acid, why is it recommended that acids should be added to water and not water to acid?
36	What is Bleaching powder?
37	Name a salt which does not contain water of crystallisation
38	what happens when water is added to quick lime.
39	What happens if tartaric acid is not added to baking powder
40	The pH of rain water collected from two cities A and B was found to be 6 and 5 respectively. Water of which city is more acidic? Find out the ratio of hydrogen ion concentration in the two samples of the rain water.
41	A compound X of sodium is commonly used for making crispy pakoras. It is also used for curing acidity in the stomach. Identify X'. What is its formula? State the reaction that takes place when it is heated.
42	Why the medium become acidic in mouth? What is the ill effect of acidic medium. How this can be prevented
43	What do you see when penta hydrated copper sulphate crystal are heated. Give reaction too.
44	Five test tubes A, B, C, D and E contain solutions having pH 2, 4, 14, 7 and 8 respectively. Among these solutions which one is:- (i) Strongly acidic. (ii) Strongly basic. (iii) Neutral (iv) Weakly acidic. (v) Weakly basic. Arrange the pH in decreasing order of hydrogen ion concentration.
45	What is Chlor - alkali process? Write the chemical reaction taking place in form of chemical equation. Name the gases given off at the anode and the cathode respectively. Write one use each of any two products produced in this process.
46	What happens when:- (i) Excess of carbondioxide is passed through lime water. (ii) Dry chlorine gas is passed over slaked lime. (iii) Electricity is passed through an aqueous solution of sodium chloride. (iv) Gypsum is heated at 373K. (v) A solution of sodium hydrogen carbonate is heated.
47	Out of sodium hydrogen carbonate, sodium carbonate, plaster of paris, bleaching powder, sodium hydroxide. (i) Name the compound used for setting fractured bones.

	(ii) Name the compound used for making baking powder. (iii) Name the compound used for softening hard water. (iv) Name the compound used for bleaching cotton in textile industry. (v) Name the compound used for making soaps and detergents. Also write their chemical formula.
48	A student dropped few pieces of marble in dilute hydrochloric acid, contained in a test tube. The evolved gas was then passed through lime water. What change would be observed in lime water? What will happen if excess of gas is passed through lime water? Write balanced chemical equations for all changes observed.
49	Account for the following: (a) Dry HCl gas does not change colour of dry blue litmus paper. (b) antacid tablets are used by a person suffering from stomach pain (c) toothpaste is used for cleaning teeth. (d) while diluting an acid, why is it recommended that the acid should be added to water and not water to acid
50	(a) what are strong acids and weak acids? Give an example for each. (b) A dry pellet of a common base "B" when kept in open absorbs moisture and turns sticky. The compound is also formed by chlor-alkali process. Identify "B". what type of reaction occurs when B is treated with dilute hydrochloric acid? Write the chemical equation.