

APOLLO

Acids, Bases Chemistry and pH

FBISE Chemistry Class 9 (SSC-I)

Domain B: Physical Chemistry

23 questions | questions

Original FBISE question crops. National Curriculum 2022-23 topic.

31.	Ammonia gas is produced when solid ammonium chloride is heated with	calcium hydroxide	calcium sulphate	hydrochloric acid	magnesium nitrate
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32.	The following equations represent reactions of dilute sulphuric acid. Which reaction is not 'typical' of a dilute acid?	$2KOH_{(aq)} + H_2SO_{4(aq)} \rightarrow K_2SO_{4(aq)} + 2H_2O_{(l)}$	$CUO_{(s)} + H_2SO_{4(aq)} \rightarrow CuSO_{4(aq)} + H_2O_{(l)}$	$Pb(NO_3)_{2(aq)} + H_2SO_{4(aq)} \rightarrow PbSO_{4(s)} + 2HNO_{3(aq)}$	$ZnCO_{3(s)} + H_2SO_{4(aq)} \rightarrow ZnSO_{4(aq)} + CO_{2(g)} + H_2O_{(l)}$
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38.	A student tests a solution with litmus paper and it turns blue. The nature of solution is _____ and having pH value of _____:	Acidic and 5	Basic and 10	Acidic and 10	Basic and 5
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(i)	What is meant by strong acid? Give one example with equation.	1+2
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(iv)	Write reaction of any one metal oxide with water (H_2O). Identify the nature of the product.	2+1
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Q.4	Give balanced reactions of HCl with: i Zn ii $NaCO_3$ iii $NaOH$	2x3	OR
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Q. 2 Attempt the following parts: (11 x 3)

(i)	What is a strong base? Write equation that represents the dissociation of $NaOH$ in water.	1+2
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OR	What is Bronsted Lowry acid? Give one reaction as example.	1+2
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Q.4	Write the balanced chemical reactions of $NaOH$ with: $NaOH$ کے درج شدہ کے ساتھ پیلز شدہ کیمیائی ری ایکشن لکھیں۔ a) HCl b) NH_4Cl c) H_2SO_4	2x3
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(i)	A student added HCl to Na_2CO_3 solution. Bubbles were observed. Identify the gas evolved. Write balanced chemical equation for the reaction.	1+2
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OR	Differentiate between a strong acid and a weak acid by explaining their dissociation in aqueous solution. Give one examples each.	03
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Compare the Arrhenius concept of acids and bases with Bronsted-Lowry concept. Give one example of each.	4+2
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Which reaction products correctly show what happens when an acid reacts with a metal carbonate?	Salt + $CO_2 + H_2O$	Salt + $H_2 + NH_3$	Salt + $N_2 + H_2O$	Salt only
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1.5 + 1.5	OR	Write chemical reaction when an acid reacts with carbonate. Describe the visible change that may appear.	2+1
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Explain the terms 'Acid' and 'Base' according to the Bronsted-Lowry theory. Identify the acid and base in the reaction: $NH_3 + H_2O \rightleftharpoons NH_4^+ + OH^-$	2+2 +2
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When a base reacts with an ammonium salt, it produces:	Hydrogen	Carbon dioxide	Oxygen	Ammonia
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OR	Write the dissociation equations of sulfuric acid (H_2SO_4) and sodium hydroxide ($NaOH$) in aqueous solution.	
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Q.5	Write chemical reactions of HCl when it reacts with: a. Mg b. CaCO ₃ c. NaOH	2x3
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State Bronsted-Lowry acid base concept. Give example of reaction between HCl and NH ₃ .	1+1 +1
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Q.4	Identify the oxidizing and reducing agents in given reactions by assigning their oxidation states (H=+1, O=-2) $2WCl_2 + 3H_2 \rightarrow W + 3H_2O$	3+3	OR	Differentiate between strong acid and a weak acid. Write dissociation equations for HCl and CH ₃ COOH in aqueous solution to support your answer.	1+1 +2 +2
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OR	Define Bronsted-Lowry acids and bases with two examples each.	03
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Q.4	Describe reactions of HCl with the following. A. Zn B. NaOH C. Na ₂ CO ₃	2x3
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Q.4	Give complete and balanced chemical reaction of NaOH with: HCl, NH ₄ Cl, H ₂ SO ₄ NaOH کے درج شدہ کے ساتھ مکمل اور بیلنسڈ کیمیائی ری ایکشنز تحریر کریں:
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