CHEMISTRY

BOOKS - BEYOND PUBLICATION

CHEMICAL EQUATIONS

Example

1. What changes do you notice generally?

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2. "Coal is burnt", "crackers are burnt" ..... Changes

Are they physical (or) chemical changes?

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3. Are they (coal, crackers) temporary changes or permanent changes?

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4. What information is provided by a blanced equation?

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5. Balance the following chemical equations.

b) $Hg(NO_3)_2 + KI \rightarrow HgI_2 + KNO_3$

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6. Balance the following chemical equations including the physical states.

1) $C_6H_{12}O_6 \rightarrow C_2H_5OH + CO_2$

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7. Balance the following chemical equations including the physical states.

3) $NH_3 + Cl_2 \rightarrow N_2H_4 + NH_4Cl$

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8. Balance the following chemical equations including the physical states.

4) $Na + H_2O \rightarrow NaOH + H_2$

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9. Write the balanced chemical equations for the following and identify the type of reaction in each case.

$\text{Calcium hydroxide}_{(aq)} + \text{Nitric acid}_{(aq)} \rightarrow \text{water}_{(I)} + \text{Calcium nitrate}_{(}$

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10. Write the balanced chemical equations for the following and identify the type of reaction in each case.

$\text{Magnesium}_{(s)} + \text{Iodine}_{(g)} \rightarrow \text{Magnesium Iodide}_{(s)}$

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11. Balance the chemical equation by including the physical states of the substances for the following reactions.

b) Sodium hydroxide reacts with hydrochloric acid to produce sodium chloride and water.

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12. Balance the chemical equation by including the physical states of the substances for the following reactions.

a) Barium chloride and sodium sulphate aqueous solutions react to give insoluble barium sulphate and aqueous solution of sodium chloride.

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13. Potassium nitrate and sodium nitrate reacts separately with copper sulphate solution. Write balanced chemical equations for the above reactions.

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14. 2 moles of Zinc reacts with a cupric chloride solution containing 6.023×10^{22} formula units of $CuCl_2$. Calculate the moles of copper obtained. $Zn_{(s)} + CuCl_{2(aq)} \rightarrow ZnCl_{2(aq)} + Cu_{(s)}$

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15. 1 Mole of propane (C_3H_8) on combustion at STP gives 'A' kilo joules of heat energy. Calculate the heat liberated when 2.4 ltrs of propane on combustion at STP.

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16. Calculate the mass and volume of oxygen required at STP to convert 2.4 kg of graphite into carbon dioxide.

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17. How do we know a chemical reaction has taken place?

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18. $CaO + H_2O \rightarrow Ca(OH_2)$. From this chemical equation, is the number of atoms of each element on both sides equal ?

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19. Na_2SO_4 + $BaCl_2$ $\rightarrow$ $BaSO_4$ + NaCl. Do the atoms of each element on left side equal to the atoms of the element on the right side of the equation?

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20. $2C_3H_8 + 10O_2 \rightarrow 6CO_2 + 8H_2O$

Is it a balanced equation as per rules? How do you say?

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21. Write an activity when calcium oxide reacts with water.

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22. How do you test the nature of the solution formed by dissolving CaO in water? what is the nature of the solution?

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23. Explain the reaction between sodium sulphate and Barium chloride.

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24. Explain the reaction between sodium sulphate and Barium chloride.

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25. Formation of a H_2 gas by the action of dil. HCl and Zn pieces.

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26. What are the steps involved in white washing of walls ?

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27. Write the balanced chemical reactions using the appropriate symbols.

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28. $Al_s + Fe_2O_3(s) \rightarrow Al_2O_3(s) + Fe_s$ (atomic masses of Al = 27 U Fe = 56 U and O = 16 U).Suppose that you are asked to calculate the amount of aluminium, required to get 1120 kg of iron by the above equation.

$2Al_{(s)}$	+	$Fe_2O_{3(s)}$	$\rightarrow$	$Al_2O_{3(s)}$	+	$2Fe_{(s)}$
(2×27) U	+	$(2\times56+3\times16)$ U	$\rightarrow$	$(2\times27+3\times16)$ U	+	(2×56) U
54 U	+	160 U	$\rightarrow$	102 U	+	112 U
or 2 mol	+	1 mol	$\rightarrow$	1 mol	+	2 mol
54 g	+	160 g	$\rightarrow$	102 g	+	112 g

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29. Calculate the volume and the number of molecules of CO_2 liberated at STP if 50 grams of $CaCO_3$ is treated with dilute hydrochloric acid which contains 7.3 grams of dissolved HCl gas.

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30. Calculate the volume, mass and number of molecules of hydrogen liberated when 230 g of sodium reacts with excess of water at STP (atomic masses of Na = 23U, O = 16 U and H = 1U).

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31. What is a chemical equation?

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32. What are the reactants and products in a chemical reaction?

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33. What is a balanced chemical equation ? Give example.

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34. What is a chemical change ? What are its properties ?

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35. What is Galvanizing?

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36. What is an alloy? Describe any one alloy.

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37. What is combustion ?

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38. What is precipitate ?

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39. Which vitamins help in preventing of spoiling of food?

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40. Why the smell and taste of food items change?

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41. What do you meant by skeleton equation ? Give one example.

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42. What is a thermal decomposition reaction ? Give an example.

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43. What is a photochemical reaction? Give one example.

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44. What is oxidation - reduction reaction or redox reaction ? Give one example.

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45. Write the chemical equation for tranishing of silver wear (black coatings on silver).

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46. Write the chemical reaction for bleaching of coloured objects using moist chlorine?

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47. How can you prevent the spoiling of food?

Watch Video Solution

48. Why the white washig gives shiny finish to the walls?

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49. "Freshly cut apple turning brown, the iron articles shiny when new, but gradually become reddish brown when left for sometime. .....". How do these changes occur ?

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50. Balance the following equations.

1) $Na + O_2 \rightarrow Na_2O$

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51. Balance the following equations.

2) $H_2O_2 \rightarrow H_2O + O_2$

Watch Video Solution

52. Balance the following equations.

3) $Mg(OH)_2 + HCl \rightarrow MgCl_2 + H_2O$

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53. Balance the following equations.

4) $Fe + O_2 \rightarrow Fe_2O_3$

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54. $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$

In the above equation, name the compound which is oxidized and which is reduced.

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55. Why do we apply paint of iron articles ?

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56. Balance the follwowing equations.

1) $Al(OH)_3 \rightarrow Al_2O_3 + H_2O$

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57. Balance the follwowing equations.

2) $NH_3 + CuO \rightarrow Cu + N_2 + H_2O$

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58. Balance the follwowing equations.

3) $Al_2(SO_4)_3 + NaOH \rightarrow Al(OH)_3 + Na_2SO_4$

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59. Balance the follwowing equations.

4) $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + H_2O$

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60. Balance the follwowing equations.

5) $NaOH + H_2SO_4 \rightarrow Na_2SO_4 + H_2O$

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61. Balance the follwowing equations.

6) $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + HCl$

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62. What happens if iron articles are exposed to moist air? Write the chemical equation to represent that reaction.

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63. On adding dilute hydrochloric acid to copper oxide powder, the solution formed is blue green. Write the new compound formed.

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64. Write the products of given reactions, if any. Give reason.

$FeCl_2 + Zn \rightarrow$

$ZnCl_2 + Fe \rightarrow$

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65. Write the products of given reactions, if any. Give reason.

$FeCl_2 + Zn \rightarrow$

$ZnCl_2 + Fe \rightarrow$

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66. a) What is a balancing equation?

b) Write the steps involved in the balancing a chemical reaction.

c) Balance the equation $C_3H_8 + O_2 \rightarrow CO_2 + H_2O$ step by step.

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67. Why dough rises swells, when it is treated with yeast ?

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68. Define chemical combination and give an example.

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69. What is "decomposition reaction"? Give examples.

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70. What is "displacement reaction" ? Give examples.

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71. What double displacement reaction? Give four examples .

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72. What is an exothermic reaction ? Give an example.

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73. What are endothermic reactions"?

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74. What is oxidation ? Give examples.

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75. What is a reducing agent ? Give examples.

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76. What is corrosion ? Discuss the methods for preventing corrosion .

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77. What do you mean by "rancidity"?

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78. What do you observe during chemical change ?

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79. How do you write a chemical equation?

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80. A common effect of oxidation in everyday life-

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81. What are the important characteristics of chemical reactions?

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82. Write some chemical equation occurring in our daily life.

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83. What symbols do we use to indicate the physical state of reactants and products in an equation ?

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84. $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)} + Q$ is .....

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85. Comment on $N_2(g) + O_2(g) + Heat \rightarrow 2NO(g)$' equation.

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86. $2Cu + O_2 \rightarrow 2CuO$ what information do you get from this equation?

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87. Write the balanced chemical equations for the following reactions.

$\text{Zinc} + \text{Silver nitrate} \rightarrow \text{Zinc nitrate} + \text{Silver}$

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88. Write the balanced chemical equations for the following reactions.

$\text{Aluminium} + \text{Copper chloride} \rightarrow \text{Aluminium chloride} + \text{Copper}$

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89. Write the balanced chemical equations for the following reactions.

$\text{Hydrogen} + \text{Chlorine} \rightarrow \text{Hydrogen chloride}$

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90. Write the balanced chemical equations for the following reactions.

$\text{Ammonium nitrate} \rightarrow \text{Nitrous oxide} + \text{Water}$

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91. What do you mean by precipitation reaction ?

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92. How does chemical displacement reaction differ from chemical decomposition reaction ? Explain with an example for each.

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93. Name the reactions taking place in the presence of sunlight.

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94. Give two examples for oxidation - reduction reaction.

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95. In the refining of silver, the recovery of silver from silver nitrate solution involved displacement by copper metal. Write the reaction involved.

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96. What do you mean by corrosion? How can you prevent it ?

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97. Explain rancidity.

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98. What is the use of keeping food in air tight containers?

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99. Balance the following chemical equation and follow the steps involved in balancing a chemical equation.$Cu_2S + O_2 \rightarrow Cu_2O + SO_2$

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100. Balance the following chemical equations.

c) $H_2 + O_2 \rightarrow H_2O$

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101. Balance the following chemical equation.

$C_2H_6 + O_2 \rightarrow CO_2 + H_2O$

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102. Balance the chemical equation by including the physical states of the substances for the following reactions.

c) Zinc pieces react with dilute hydrochloric acid to liberate hydrogen gas and forms zinc chloride.

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103. Mohan was working in a factory. He purchased a new cycle but kept it in the open even after duty hours. After two months he found that the cycle chain and even the handles got rusted. His friend advised him to apply a coating of rust proof paint to the cycle and not to keep it in the open in future.

Why was the cycle rusted ?

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104. Mohan was working in a factory. He purchased a new cycle but kept it in the open even after duty hours. After two months he found that the cycle chain and even the handles got rusted. His friend advised him to apply a coating of rust proof paint to the cycle and not to keep it in the

open in future.

Why was the cycle rusted ?

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105. i) $CaCO_{3(s)} \rightarrow CaO_{(s)} + CO_{2(g)}$

ii) $2AgBr_{(s)} \rightarrow 2Ag_{(s)} + Br_{2(g)}$

Mention the types of reaction of which the above equations belong. Also mention which of them is a photochemical reaction.

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106. i) $CaCO_{3(s)} \rightarrow CaO_{(s)} + CO_{2(g)}$

ii) $2AgBr_{(s)} \rightarrow 2Ag_{(s)} + Br_{2(g)}$

Mention the types of reaction of which the above equations belong. Also mention which of them is a photochemical reaction.

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107. Write the steps involved in the balancing a chemical reaction. Give an examples balancing the chemical equation.

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108. How to make a chemical equation more informative?

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109. What is balanced chemical equation? Why should chemical equations be balanced?

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110. Write an equation for decomposition reaction where energy is supplied in the form of heat/light/electricity.

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111. Why does respiration considered as an exothermic reaction ? Explain.

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112. What is the difference between displacement and double displacement reactions ? Write equations for these reactions.

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113. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ How many moles of NO_2 are formed when 2 moles of $Ca(NO_3)_2$ is decomposed?

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114. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ What is the

volume of NO_2 produced when 164 gm of $Ca(NO_3)_2$ is heated at constant temperature and pressure ?

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115. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ Calculate the mass of Calcium Oxide formed when 82 gm of $Ca(NO_3)_2$ is heated.

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116. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ What is the quantity of $Ca(NO_3)_2$, is required to produce 5 moles of gaseous products?

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117. We write symbol of water as H_2O. State why should not we write it

HO_2

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118. Balance the following chemical equations:

$Na_2SO_4 + BaCI_2 \rightarrow BaSO_4 + NaCI$

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119. balance the following chemical equations:

$Al_4C_3 + H_2O \rightarrow CH_4 + Al(OH)_3$

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120. balance the chemical equations: $Pb(NO_3)_2 \rightarrow PbO + NO_2 + O_2$

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121. Balance the chemical equation $Fe_2O_3 + Al \rightarrow Fe + Al_2O_3$. Write the steps of balancing.

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122. Write the balanced chemical equations for the following reactions.

$\text{Zinc} + \text{Silver nitrate} \rightarrow \text{Zinc nitrate} + \text{Silver}$

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123. Write the balanced chemical equations for the following reactions.

$\text{Aluminium} + \text{Copper chloride} \rightarrow \text{Aluminium chloride} + \text{Copper}$

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124. Write the balanced chemical equations for the following reactions.

$\text{Hydrogen} + \text{Chlorine} \rightarrow \text{Hydrogen chloride}$

Watch Video Solution

125. Write the balanced chemical equations for the following reactions.

$\text{Ammonium nitrate} \rightarrow \text{Nitrous oxide} + \text{Water}$

Watch Video Solution

126. Write the balanced chemical equations for the following and identify the type of reaction in each case.

$\text{Magnesium}_{(s)} + \text{Hydrochloric acid}_{(aq)} \rightarrow \text{Magnesium chloride}_{(aq)} + \text{Hyd}$

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127. Write the balanced chemical equations for the following and identify the type of reaction in each case.

$\text{Zinc}_{(s)} + \text{Calcium chloride}_{(aq)} \rightarrow \text{Zinc Chloride}_{(aq)} + \text{Calcium}_{(s)}$

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128. How do you appreciate the role of oxygen in combustion process?

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129. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ How many moles of NO_2 are formed when 2 moles of $Ca(NO_3)_2$ is decomposed?

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130. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ What is the volume of NO_2 produced when 164 gm of $Ca(NO_3)_2$ is heated at constant temperature and pressure ?

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131. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ Calculate the mass of Calcium Oxide formed when 82 gm of $Ca(NO_3)_2$ is heated.

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132. Observe the following equation which shows the action of heat on Calcium Nitrate : $2Ca(NO_3)_2 \rightarrow 2CaO + 4NO_2 + O_2$ What is the quantity of $Ca(NO_3)_2$, is required to produce 5 moles of gaseous products?

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133. Why should we balance a chemical equation? Take any one chemical equation and explain the procedure of balancing it.

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134. $N_{2(g)} + O_{2(g)} + \text{Heat} \rightarrow 2NO_{(g)}$

What information do you get from the above equation ? Comment.

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135. Write an activity about how you conduct an experiment to show that more reactive metals metals replace less reactive metals from their compounds.

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136. Balance the following chemical equations.

i) $Zn_{(s)} + AgNO_{3(aq)} \rightarrow Zn(NO_3)_{2(aq)} + Ag_{(s)}$

Watch Video Solution

137. Balance the following chemical equations.

ii) $Fe_2O_{3(s)} + C_{(s)} \rightarrow Fe_{(s)} + CO_{2(g)}$

Watch Video Solution

138. Balance the following chemical equations.

iii) $Ag_{(s)} + H_2S_{(g)} \rightarrow Ag_2S_{(s)} + H_2O_{(l)}$

Watch Video Solution

139. Balance the following chemical equations.

iv) $Cu_{(s)} + O_{2(g)} \rightarrow CuO_{(s)}$

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140. What is a skeleton equation ?

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141. Write the reactants and products in the following reaction. Calcium oxide + Water $\rightarrow$ Calcium hydroxide.

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142. What is a chemical equation?

Watch Video Solution

143. What is a limiting reagent?

Watch Video Solution

144. What are the changes observed in a chemical reaction ?

Watch Video Solution

145. What is a balanced chemical equation ? Give example.

Watch Video Solution

146. What are your observations after adding Zinc granules to HCI?

Watch Video Solution

147. Write the balanced chemical reaction for the following and identify the type of reaction in each case.

B)

$$\text{Zinc}_{(s)} + \text{Hydrochloric acid}_{(aq)} \rightarrow \text{Zinc chloride}_{(aq)} + \text{Hydrogen}_{(g)}$$

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148. What are the precautions to be observed while mixing Zn and HCI?

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149. How do you test the nature of the solution formed by dissolving CaO in water? what is the nature of the solution?

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150. Water is added to quick lime in a beaker and you touch the bottom of the beaker what do you notice ? What is the reason ?

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151. How do you test the gas evolved while Zn granules are added to HCI ?

Watch Video Solution

152. Explain the reaction between sodium sulphate and Barium chloride.

Watch Video Solution

153. How do you test the gas evolved while Zn granules are added to HCI ?

Watch Video Solution

154. What do you notice when water added to quick lime?

Watch Video Solution

155. Calculate the volume of O_2 at STP required to completely burn 100 ml. of acetylene.

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156. How much minimum volume of CO at STP is needed to react completely with 0.112 L of O_2 at 1.5 atm. Pressure and $127^\circ C$ to give CO_2.

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157. Calculate the volume and the number of molecules of CO_2 liberated at STP if 50 grams of $CaCO_3$ is treated with dilute hydrochloric acid which contains 7.3 grams of dissolved HCl gas.

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158. How much of lime (CaO) can be obtained by the calcinations of 300 g of lime stone?

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159. What volume of H_2 at STP is required to reduce 0.795 g of CuO to give Cu and H_2O.

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160. Where do we write reactants in a chemical equation ?

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161. Why all the chemical equations must balance ?

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162. Why should we balance a chemical equation?

Watch Video Solution

163. $N_{2(g)} + O_{2(g)} + \text{Heat} \rightarrow 2NO_{(g)}$

What information do you get from the above equation ? Comment.

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164. Calculate the mass and volume of oxygen required at STP to convert 2.4 kg of graphite into carbon dioxide.

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Exercise

1. Which of the following is correct ?

A. $Zn + HCl \rightarrow ZnCl_2 + H_2$

B. $2Zn + HCl \rightarrow 2ZnCl_2 + H - 2$

C. $Zn + 2Hcl \rightarrow ZnCl_2 + H_2$

D. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$

Answer:

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2. Downward arrow in chemical equation indicates-

A. Direction

B. Gas

C. Precipitate

D. No reaction

Answer:

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3. The colour of the precipitate of lead iodide is-

A. blue

B. black

C. green

D. yellow

Answer:

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4. which of the following is a skeleton reaction?

A. $C_3H_8 + O - 2 \rightarrow CO_2 + H_2O$

B. $Fe_2O_3 + 2Al \rightarrow 2Fe + Al_2O_3$

C. $AgNO_3 + NaCl \rightarrow AgCl + NaNO_3$

D. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$

Answer:

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5. CaO reacts with water to form.....

A. $CaCO_3$

B. $Ca(OH)_3$

C. $CaCl_2$

D. $Ca(NO_3)_2$

Answer:

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6. Ammonia is formed by the reaction of gases.....

A. H_2 and O_2

B. N_2 and O_2

C. N_2 and H_2

D. H_2 and He

Answer:

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7. A solution of potassium iodide reacts with lead nitrate to give.....

A. KNO_3

B. PbI_2

C. A and B

D. PbO

Answer:

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8. When a smal piece of zinc metal is added to a solution of Copper sulphate and onheating the products formed are.....

A. CuO

B. $ZnSO_4 + Cu$

C. ZnO

D. $H_2 \uparrow$

Answer:

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9. The chemical reaction in which energy is absorbed to form a new compound is called. .....

A. exothermic reaction

B. endothermic reaction

C. thermal reaction

D. photochemical reaction

Answer:

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10. The substances that are present on left side of a chemical equation are called .....

A. reactants

B. products

C. precipitates

D. gases

Answer:

Watch Video Solution

11. A chemical equation should be balanced because the law..... Should be verified.

A. constant proportions

B. conservation of mass

C. law of equality

D. law of balance

Answer:

Watch Video Solution

12. C+$O_2 \rightarrow CO_2 + Q$. This is ___ reaction.

A. endothermic

B. chemical

C. exothermic

D. photochemical

Answer:

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13. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3$+$H_2O$. In this reaction shiny finish to walls is due to _____

A. $Ca(OH)_2$

B. $CaCO_3$

C. CO_2

D. H_2O

Answer:

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14. Fe_2O_3 + 2Al -rarr Al_2O_3 + 2Fe. ఈ చర్య దేనికి ఉదాహరణ?

A. Al

B. $2AlO_3$

C. Al_2O_3

D. $Al(O_3)_2$

Answer:

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15. Fill in the blanks: $C_6H_{12}O_6 + 6O_2 \rightarrow ..... + 6H_2O + Q$

A. CO_2

B. $6CO_2$

C. $3CO_2$

D. $4CO_2$

Answer:

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16. $Pb(NO_3)_2 + \ldots\ldots\ldots\ldots\ldots = PbI_2 + 2KNO_3$

A. KI

B. 2KI

C. Kl_2

D. K_2l

Answer:

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17. $NaCl + AgNO_3 \rightarrow \ldots\ldots\ldots\ldots + NaNO_3$

A. $AgCl_2$

B. 2 AgCl

C. AgCl

D. $AgNO_3$

Answer:

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18. Fill in the blanks: $Na_2SO_4 + ... \rightarrow BaSO_4 + 2NaCl$

A. $BaCl_2$

B. 2 BaCl

C. Ba_2Cl

D. BaCl

Answer:

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19. Balance the following chemical equations.

i) $Zn_{(s)} + AgNO_{3(aq)} \rightarrow Zn(NO_3)_{2(aq)} + Ag_{(s)}$

A. $2Zn + AgNO_3 \rightarrow Zn(NO_3)_2 + 2Ag$

B. $Zn + 2AgNO_3 \rightarrow Zn(NO_3)_2 + 2Ag$

C. $Zn + 2AgNO_3 \rightarrow ZnNO_3 + 2Ag$

D. $2Zn + 2AgNO_3 \rightarrow Zn(NO_3)_2 + Ag$

Answer:

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20. If some amount of energy is released in a chemical reaction, then it is called ___ reaction.

A. exothermic

B. endothermic

C. oxidation

D. reduction

Answer:

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21. Colour of silvr bromide is.....

A. red

B. silver

C. light yellow

D. brown

Answer:

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22. $Cl_2 + H_2O \rightarrow \ldots\ldots\ldots + HCl$

A. H_2O

B. HOCl

C. HCl

D. OH^-

Answer:

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23. Precipitate in a reaction is indicated by which arrow mark ?

A. $\rightarrow$

B. $\uparrow$

C. $\downarrow$

D. $\leftarrow$

Answer:

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24. What happens when dil. Hydrochloric acid is added to iron filing ? Choose the correct answer.

A. hydrogen gas and iron chloride are produced

B. chlorine gas and iron hydorxide are produced

C. no reactioin takes place

D. iron salt and water are produced

Answer:

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25. In the chemical reaction $Fe_2O_3 + 2AI \xrightarrow{\Delta} 2Fe + AI_2O_3$ the symbol represents

A. compressing

B. heating

C. cooling

D. smelting

Answer:

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26. Identify the exothermic reaction among the following-

A. $C + O_2 \rightarrow CO_2$

B. $N_2 + O_2 \rightarrow 2NO$

C. $CaO + H_2O \rightarrow Ca(OH)_2$

D. all the above

Answer:

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27. Atomic mass of oxygen-

A. 8U

B. 23U

C. 27U

D. 16U

Answer:

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28. Chemical reaction occurs with the ---------- of chemical bonds-

A. formation

B. breaking

C. both A and B

D. none

Answer:

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29. The metal formed when zinc react with $AgNO_3$ is-

A. Au

B. Ag

C. Al

D. Cu

Answer:

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30. The substances that are present on left side of a chemical equation are called .....

A. reactants

B. oxidants

C. reductants

D. products

Answer:

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31. The formula of hypochlorous acid is-

A. HCl

B. H_2SO_4

C. HOCl

D. H_2Cl_3

Answer:

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32. Every gas at STP occupies 22.4 litres and it is known as.

A. gram molecular weight

B. gram equivalent weight

C. gram molecular mass

D. gram molecular volume

Answer:

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33. Burning of petroleum gas (LPG) ------- change.

A. physical

B. chemical

C. both A and B

D. neither physical nor chemical

Answer:

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34. Identify the balance equations among.

A. $H_2 + O_2 \rightarrow 2H_2O$

B. $H_2 + O_2 \rightarrow 2H_2O$

C. $2H_2 + O_2 \rightarrow 2H_2O$

D. $H_2 + 2O_2 \rightarrow H_2O_4$

Answer:

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35. In exothermic reaction heat energy is-

A. absorbed

B. created

C. released

D. none of these

Answer:

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36. The process of preparing slaked lime by adding water to quicklime is this type of chemical reaction.

A. Decomposition reaction

B. Exothermic reaction

C. Endothermic reaction

D. Displacement reaction

Answer:

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37. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$ is an example for .....

A. Chemical combination

B. Chemical decomposition

C. Chemical displacement

D. Chemical double displacement

Answer:

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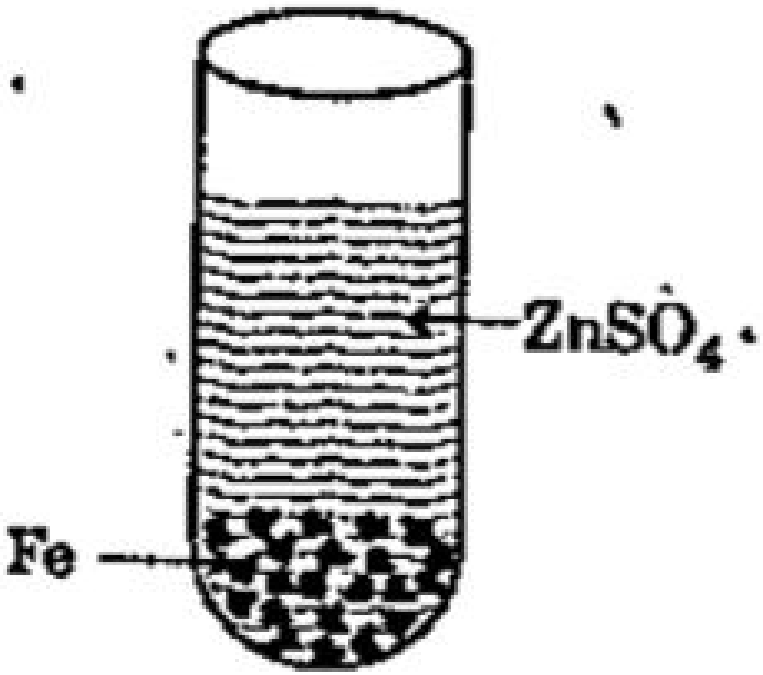
38. The correct observation made by the student after putting clean pieces of Iron in the test-tube containing Zine sulphate phate are as

shown in the figure.



A. solution becomes colourless and Zinc gets deposited or Iron.

B. solution becomes green and Zinc gets deposited on Iron.

C. iron pieces get dissolved in the solution making it green.

D. no reaction is observed.

Answer:

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39. Burning of magnesium crackers is a reaction of .....

A. reduction

B. cracking

C. oxidation

D. galvnizing

Answer:

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40. If the gas liberated in an experiment allows the burning splinter to continue burning more brightly in its presence, the gas is .....

A. oxygen

B. nitrogen

C. hydrogen

D. carbon dioxide

Answer:

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41. Why should we write the arrow tat pointing towards products while ?

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42. What should we do, if two or more reactants are there writing a chemical equation ?

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43. Why should we balance a chemical equation?

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44. What is a chemical equation?

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45. By a balanced chemical equation, what do we know about atoms ?

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46. How many steps are there in balancing the equation ?

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47. Is there any imp0rtance of molecular formulae in writing the equation ?

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48. How do the co-efficients of the substances would be, while balancing the equation ?

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49. Can we change the ratio of atoms in the molecules of the substances while balancing the equation ?

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50. Sitara told that a chemical reaction occurs in ripening of grapes. Is it true or not ? Explain.

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51. $X - Y \leftarrow Z$. Raja wrote a chemical equation like so ? What are the defects in it ? Correct them.

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52. $Zn + HCl \rightarrow ZnCl_2 + H_2$.Is it a balanced equation ? Give the reason.

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53. Rupa says "xx+ y $\rightarrow$ xxy +Q` indicates an endothermic reaction". Can you support it ? Why ?

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54. $4Agcl \rightarrow 4Ag + 2Cl_2$. Is it a balanced equation ? Yet it is not in a proper way how ?

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55. An arrow pointing downwards in a chemical reaction shows.....

A. Evolution of gas

B. Formation of precipitate

C. Oxidation

D. Displacement

Answer:

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56. A solution of sodium carbonate reacts with $Ca(OH)_2$ to give

A. $CaCO_3$

B. NaOH

C. both A and B

D. CaO

Answer:

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57. Which reaction is a reversible reaction ?

A. $S + O_2 \rightarrow SO_2$

B. $PCl_5 \rightarrow PCl_3 + Cl_2$

C. $2Na + Cl_2 \rightarrow 2NaCl$

D. $CaCO_3 \rightarrow CaO + CO_2$

Answer:

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58. Which of the following precipitate is formed, on mixing lead nitrate $Pb(NO_3)_2$ with potassium iodide.

A. Brown coloured PbI_2

B. $Greencoloured PbI_2$

C. $Bluecoloured PbI_2$

D. $Yellowcoloured PbI_2$

Answer:

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59. Which of the following is formed, when magnesium burns in air ?

A. White coloured magnesium oxide

B. Black coloured magnesium oxide

C. Yellow coloured magnesium oxide

D. Red coloured magnesium oxide

Answer:

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60. Which of the following precipitate is formed on mixing sodium with barium chloride solution ?

A. White precipitate of barium sulphate

B. Black precipitate of barium sulphate

C. Yellow precipitate of barium sulphate

D. Red precipitate of barium sulphate

Answer:

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61. Which of the following is, when the black coating that appears when corrosion of silver occurs ?

A. silver sulphate

B. silver oxide

C. silver sulphide

D. silver chloride

Answer:

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62. By using which of the following one, we can calculate tha number of molecules and atoms of different substances from the equation ?

A. Molar mass and Unified

B. Avogadro's number

C. both A and B

D. A only

Answer:

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63. Which of the following is the colour of copper sulphate $(CuSO_4)$?

A. Red

B. White

C. Yellow

D. Blue

Answer:

Watch Video Solution

64. The process of preparing slaked lime by adding water to quicklime is this type of chemical reaction.

A. Decomposition

B. Exothermic

C. Endothermic

D. Displacement

Answer:

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65. A balanced equation contains

A. Equal number of moles of reactants and products

B. Equal number of molecules of reactants and products

C. Equal number of atoms of different elements on reactant side and product side

D. all the above

Answer:

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66. Unbalanced equation is called

A. Basic equation

B. Skeleton equation

C. Stoichiometric equation

D. Fundamental equation

Answer:

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67. $xH_2 + yO_2 \rightarrow zH_2O$. The values of x, y, z are

A. xx = 1, y =1, z = 1

B. xx = 2, y = 1, z = 2

C. xx = 2 ,y = 2,z = 2

D. xx = 2, y = 1,z = 1

Answer:

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68. Which of the following statement is wrong ?

A. Conversion of milk intro curd is a chemical change

B. Addition of water to quick lime liberates heat energy

C. Addition of aqueous Na_2SO_4 to aquewous $BaCl_2$ form clear solution

D. Calcium oxide produce colourless solution when dissolved in water

Answer:

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69. Which of the following statement is / are true ?

A. Molecular mass is expressed unified mass (U)

B. 22, 4 l of any gas at STP contain 6.023×10^{23} molecules.

C. $28 g of N_2$ at STP occupies 22.4 litr of volume

D. All are correct

Answer:

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70. HCl is reacting with zinc granules. How can you say that it is an exothermic reaction ?

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71. When HCl reacts with zinc. Which gas will evolved ? How can you prove it ?

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72. Where does the arrow head point face in a chemical equation ? Why ?

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73. Where do you indicate hate energy in exo thermic reactions in a chemical equation reactions ? Why ?

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