



CHEMISTRY

BOOKS - MBD

CHKHOICAL REACTIONS AND EQUATIONS

Example

1. Write the balanced equation for the following chemical reaction: Sodium + water \rightarrow Sodium hydroxide + Hydrogen



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2. Write a balanced chemical equation with state symbols for the reaction : solution of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.



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3. Write a balanced chemical equation with state symbols for the reaction : sodium hydroxide solution(in water) reacts with hydrochloric acid

solution(in water) to produce sodium chloride and water



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4. A solution of substance 'X' is used for white washing. Name the substance 'X' and write its formula



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5. A solution of substance 'X' is used for white washing. Write the reaction of the substance X

named in above with water.

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6. Why is the amount of gas collected in one of the test tubes in activity 1.7 double of the amount collected in the other? name this gas.

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7. Why does the colour of copper sulphate solution change, when an iron nail is dipped in it?

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8. Give an example of a double displacement reaction other than the one give in the activity1.10 given in textbook



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9. Identify the substances that are oxidised and the substance that are reduced in the following reaction: $4\text{Na}(s) + \text{O}_2(g) \rightarrow 2\text{Na}_2\text{O}(s)$

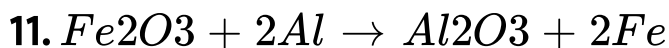


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10. Identify the substances that are oxidised and the substance that are reduced in the following reaction: $CuO(s) + H_2(g) \rightarrow Cu(s) + H_2O(l)$



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The above reaction is an example of

- A. combination reaction
- B. double displacement reaction
- C. decomposition reaction

D. displacement reaction

Answer:



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12. What happens when dilute hydrochloric acid is added to iron filings? Tick the correct answer

A. hydrogen gas and iron chloride are produced

B. chlorine gas and iron hydroxide are produced

C. no reaction takes place

D. iron salt and water are produced

Answer:



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13. What is a balanced chemical equation? Why should chemical equations be balanced ?



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14. Translate the following statements into chemical equations and then balance them:

A. hydrogen gas combine with nitrogen to form ammonia.

B. hydrogen sulphide gas burns in air to give water and sulphur dioxide

C. barium chloride reacts with aluminium sulphate to give aluminium chloride and a precipitate of barium sulphate

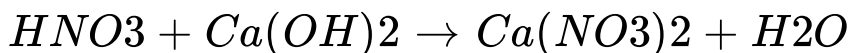
D. potassium metal reacts with water to give potassium hydroxide and hydrogen gas

Answer:



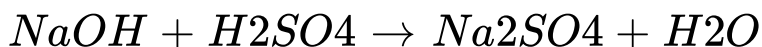
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15. Balance the following chemical equation:



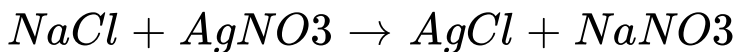
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16. Balance the following chemical equation:



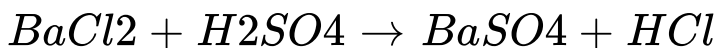
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17. Balance the following chemical equation:



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18. Balance the following chemical equation:



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19. Write the balanced chemical equation for the following reaction: calcium hydroxide+carbon

dioxide gives calcium carbonate+water

A. calcium hydroxide+carbon dioxide gives

calcium carbonate+water

B.

C. aluminium + copper chloride gives aluminium

chloride+copper

D. barium chloride+potassium sulphate gives

barium sulphate+potassium chloride

Answer:



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20. Write the balanced chemical equation for the following reaction: Zinc + Silver nitrate \rightarrow Zinc nitrate + Silver



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21. Write the balanced chemical equation for the following reaction: Aluminium + Copper chloride \rightarrow Aluminium chloride + copper



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22. Write the balanced chemical equation for the following reaction: Barium chloride + Potassium sulphate \rightarrow Barium sulphate + Potassium chloride.

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23. Write the balanced chemical equation for the following reaction and identify the type of reaction
Potassium bromide (aq) + Barium iodide (aq) \rightarrow
Potassium iodide (aq) + Barium bromide (s)

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24. Write the balanced chemical equation for the following reaction and identify the type of reaction .

Zinc carbonate (s) \rightarrow Zinc oxide (s)+Carbon dioxide



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25. Write the balanced chemical equation for the following reaction and identify the type of reaction.

Hydrogen (g)+Chlorine(g) \rightarrow Hydrogen chloride(g)



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26. Write the balanced chemical equation for the following reaction and identify the type of reaction .

Magnesium (s)+Hydrochloric acid(aq) \rightarrow

Magnesium chloride (aq)+Hydrogen(g)



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27. What is meant by exothermic and endothermic reaction? Give examples



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28. differentiate between exothermic and endothermic reaction.

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29. Why is respiration considered as an exothermic reaction? explain

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30. Why are decomposition reactions called opposite of combination reactions? write equations for these

reactions



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31. Write one equation each for decomposition reactions where energy is supplied in the form of heat, light or electricity



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32. What is the difference between the displacement and double displacement reaction write equation for these reactions



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

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34. What do you mean by precipitation reaction? explain by giving examples

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35. Explain the following in terms of gain or loss of oxygen with two examples each: oxidation and reduction



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36. Explain the reduction in terms of loss of oxygen with two examples



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37. A shiny brown coloured element x on heating in air becomes black in colour name the element x and the blacked coloured compound formed

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38. Why do we apply paint on iron articles?

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39. Oil and fat containing food items are flushed with nitrogen why?

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40. Explain the following term with one example :

Corrosion



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41. Explain the following term with one example :

Rancidity.



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42. How do write balanced chemical equations?



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43. Give types of chemical reactions with examples



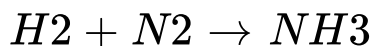
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44. Briefly describe oxidation and reduction with suitable examples.



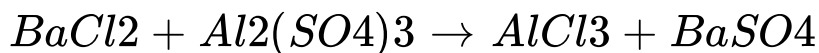
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45. Balance the following chemical equation:



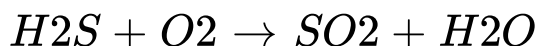
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46. Balance the following chemical equation:



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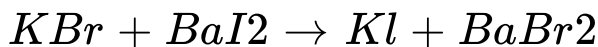
47. Balance the following chemical equation:





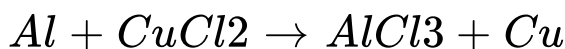
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48. Balance the following chemical equation:



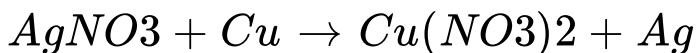
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49. Balance the following chemical equation:



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50. Balance the following chemical equation:



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51. Balance the following chemical equation:



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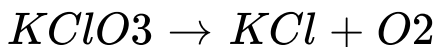
52. Balance the following chemical equation:





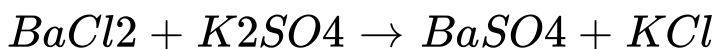
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53. Balance the following chemical equation:



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54. Balance the following chemical equation:



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55. Give two examples from our daily life to show that chemical changes do take place in our daily life



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56. Differentiate between balanced and skeletal chemical equation.



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57. What are the necessary requirements while writing a chemical equation?



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58. Give one example each of balanced and skeletal equation.



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59. Give chemical formula for slaked lime



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60. Why there is a shine on the walls after two three days of white washing ?



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61. Give chemical formula of marble



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62. Give colour of following solution :

FeSO₄



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63. Give colour of following solution :

CuSO_4



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64. What is rusting? What is the chemical formula of rust?



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65. Fats are oils containing foods, when kept for long time then what change take place in items? What is

name of this process?



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66. How can we stop rancidity?



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67. Zinc metal can displace copper from copper sulphate solution but copper metal can not displace zinc from the solution of zinc sulphate give reason.



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68. What happens when zinc rod is placed in copper sulphate solution? Give chemical equation for the reaction.

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69. Write name of the substance which got reduced and oxidized. $SO_2 + H_2S \rightarrow H_2O + S$

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70. Write name of the substance which got reduced and oxidized:- $2Al + 6HCl \rightarrow 2AlCl_3 + 3H_2$



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71. Write name of the substance which got reduced and oxidized:- $\text{Zn} + 2\text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + 2\text{Ag}$



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72. Write name of the substance which got reduced and oxidized:- $2\text{H}_2\text{S} + \text{SO}_2 \rightarrow 3\text{S} + 2\text{H}_2\text{O}$



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73. Write name of the substance which got reduced

and oxidized:- $H_2 + CuO \rightarrow Cu + H_2O$



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74. What does a complete chemical equation represent and why is it necessary to balance a chemical equation?



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75. What type of reactions are combustion of coal and formation of water represent by chemical equation

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76. How is decomposition reaction different from combination reaction?

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77. Give two examples of decompositon reaction.

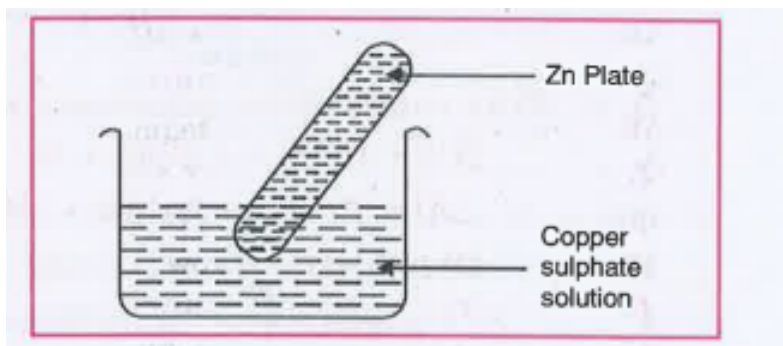
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78. What is the difference between oxidation and reduction?

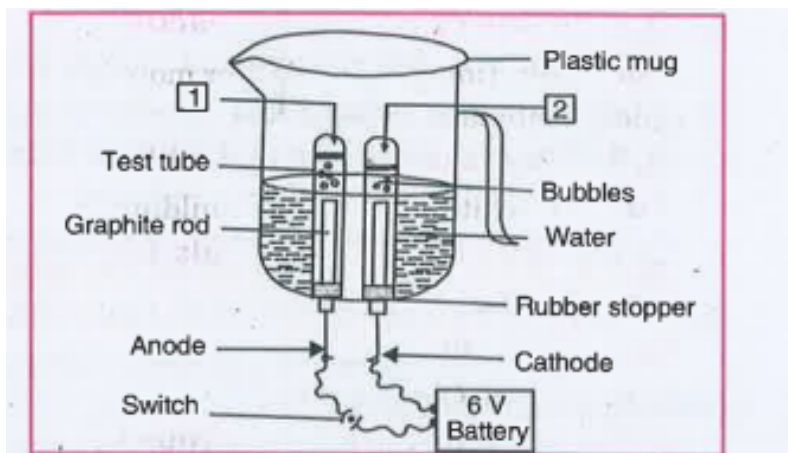
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79. Which type of reaction is shown in figure given below and define it .



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80. What is shown in the figure given a head? Also indicate 1 and 2 in the figure



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81. The following diagram displays a chemical reaction. Observe carefully and answer the following

question identify the type of chemical reaction



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82. The following diagram displays a chemical reaction. Observe carefully and answer the following question : identify the type of chemical reaction.

write the chemical reaction



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83. What do we get on the combustion of magnesium ribbon?

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84. What is law of conservation of mass?



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85. Define balanced chemical equation



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86. Give one example of balanced equation



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87. If (g) is written with water, then what does it represent?

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88. Sometimes we show the conditions of a reaction like pressure temperature catalyst etc. where do we write it.

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89. How does new substance form in a chemical reaction?

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90. Define combination reaction



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91. What is the use of slaked lime?



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92. Write chemical formula for marble



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93. What do we get on the combustion of natural gas?



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94. Write formula for ferrous sulphate



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95. What is formed of grey colour from silver chloride in sun light?



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96. Where is decomposition of silver chloride reaction used?

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97. Why after some time shining metal articles become dull?

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98. What is the colour of rust coating on iron?

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99. What is corrosion?

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100. What is the colour of coating on silver due to corrosion?

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101. Due to which process, there is a change in smell and taste of food items which contain fat and oils?

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102. What do the manufacturer of chips flush in the packets of chips to prevent oxidation?

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103. What is the colour of coating of copper oxide?

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104. What is other name of oxidation-reduction reaction.



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105. When does oxidation of substance take place in a reaction?



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106. When does reduction of substance take place in a reaction?



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107. White coloured silver chloride change to which colour in sunlight?



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108. Give example of endothermic reaction



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109. In which calcium carbonate dissociate when heat is given to it?



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110. Write chemical formula for slaked lime.



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111. What is special there in potato, rice and bread?



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112. What do we get on the decomposition of carbohydrate?



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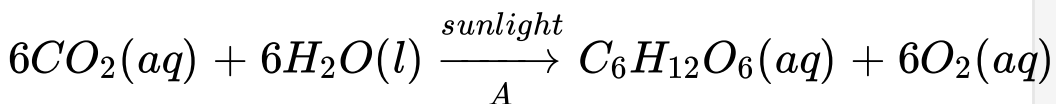
113. Write the reaction for combustion of natural gas?

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114. What type of reaction is combustion of coal and formation of water from H_2 and O_2 ?

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115.



What is A in the above reaction.

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116. What is skeletal chemical equation?

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117. What are products?

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118. What are reactants?



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119. With what, magnesium ribbon is cleaned before burning it in air.



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120. What is reduction reaction?



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121. What is oxidation reaction?

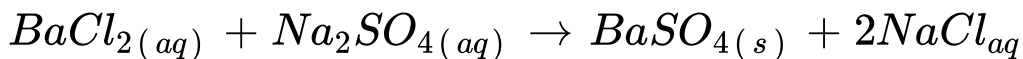


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122. If in a reaction one reactant is reduced and other is oxidised, what is name of such a reaction?

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123. The chemical reaction given below represents:



- A. decomposition reaction
- B. displacement reaction
- C. combination reaction

D. double displacement reaction

Answer:



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124. The chemical reaction in which heat energy is given out is called

- A. exothermic reaction
- B. endothermic reacion
- C. polymerisation reaction
- D. all

Answer:



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125. During electrolysis, hydrogen and oxygen are produced in the ratio by volume

A. 2 : 1

B. 1 : 1

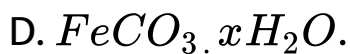
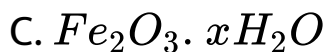
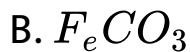
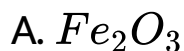
C. 2 : 2

D. 4 : 1

Answer:

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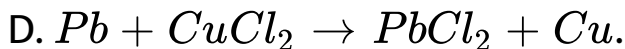
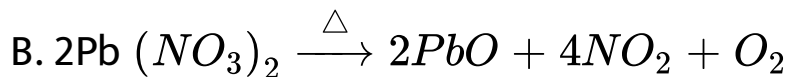
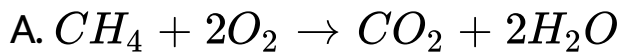
126. The chemical formula of rust is:



Answer:

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127. Which is an example of decomposition?



Answer:



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128. Redox reaction involves:

A. Oxidation

B. Reduction

C. Both oxidation and reduction

D. None

Answer:



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129. In a packet of chips oxygen is replaced by gas:

A. CO_2

B. SO_2

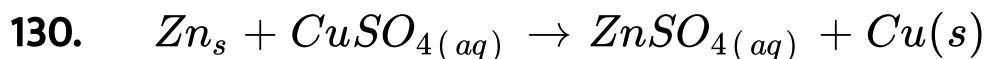
C. N_2

D. O_3

Answer:



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What types of chemical reaction is shown by the above equation?

A. combination reaction

B. dissociation reaction

C. displacement reaction

D. double displacement reaction

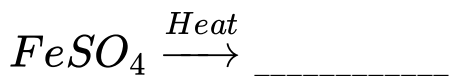
Answer:



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131. Fill in the blank

Complete the following chemical equation



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132. Fill in the blank

Respiration is an _____ reaction.



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133. Fill in the blank

Rusting of iron is a _____ reaction



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