CHEMISTRY

BOOKS - VGS PUBLICATION-BRILLIANT

ATOMS ,MOLECULES AND CHEMICAL REACTIONS

Exercise

1. State and explain the law of conservation of mass.

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2. What is the law of conservation of mass according to chemical equation?

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3. "Dry HCl is not acid". How do you prove it?

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4. In a class, a teacher asked students to write the molecular formula of oxygen. Shamita wrote the formula as O_2, and Priyanka as O. Which one is correct? State the reason.

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5. Find out the chemical names and formulae for the following common household substances.

a) common salt b) baking soda c) washing soda d) vinegar

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6. Find out the chemical names and formulae for the following common household substances.

a) common salt b) baking soda c) washing soda d) vinegar

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7. Find out the chemical names and formulae for the following common household substances. Washing soda

8. Find out the chemical names and formulae for the following common household substances. Vinegar

9. Write some chemical names of the substances, that are used in your house.

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10. Calculate the mass of the following

0.5 mole of N_2 gas

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11. Calculate the mass of the following

0.5 mole of N atoms

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12. Calculate the mass of the following

3.011×10^{23} number of N atoms

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13. Calculate the mass of the following

6.022×10^{23} number of N_2 molecules

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14. Convert in to moles:

12 g of O_2 gas

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15. Convert in to moles:

20 g of water

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16. Convert in to moles:

22 g of carbon dioxide

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17. Write the valencies of Fe in $FeCl_2$ and $FeCl_3$.

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18. Calculate the molar mass of suphuric acid (H_2SO4) and glucose $(C_8H_{12}O_6)$.

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19. Which has more number of atoms 100 g of sodium or 100 g of iron? Justify your answer. Atomic mass of sodium =23 u, atomic mass of iron= 56 u)

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

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21. Give an example for decomposition reaction.

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22. Give an example for decomposition reaction.

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23. Give examples to Electrolysis

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24. How does chemical displacement reaction differ from chemical decomposition reaction ?

Explain with an example for each.

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25. Differentiate between chemical displacement reactions and chemical decomposition reaction.

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

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27. Give two examples for oxidation - reduction reaction.

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28. Draw a diagram to show the experimental setup for the law of conservation of mass.

(OR)

Draw the experimental arrangement used in

verifying law of conservation of mass. Write the law of conservation of mass.

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29. Why do we apply paint of iron articles ?

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30. How can we prevent rusting of Iron?

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

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32. 15.9 of copper sulphate and 10.6 g of sodium carbonate react together to give 14.2 g of sodium sulphate and 12.3 g of copper carbonate . Which law of chemical combinations is obeyed ? How?

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33. Carbon dioxide is added to 112 g of calcium oxide. The product formed is 200 g of calcium carbonate. Calculate the mass of carbon dioxide used. Which law of chemical combination will govern your answer?

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34. Imagine what would happens if we do not standard symbols for elements.

(OR)

is it necessary to use symbols for elements?

Write your opinion.

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

The above reaction is an example of :

A. Combination reactions

B. Decomposition reaction

C. Displacement reaction

D. Double decomposition reaction

Answer:

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36. 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 hydroxide are produced

C. No reaction takes place

D. Iron salt and water are produced

Answer:

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37. $2PbO_{(s)} + C_{(s)} \rightarrow 2Pb_{(s)} + CO_{2(g)}$

Which of the following statements are correct for the above chemical reaction ?

i) Lead is reduced

ii) Carbon dioxide is oxidized

iii) Carbon is oxidized

iv) Lead oxide is reduced

A. Lead oxide is reduced

B. Carbon dioxide is oxidized

C. Carbon is oxidized

D. a and c are correct

Answer:

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38. The chemical equation

$$BaCl_2 + Na_2SO_4 \rightarrow BaSO_4 + 2NaCl$$

represents following type of chemical reaction.

A. displacement

B. combination

C. decomposition

D. double displacement

Answer:

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39. The reaction of formation hydrogen chloride from hydrogen and chlorine represents following type of chemical reaction

A. decomposition

B. displacement

C. combination

D. double displacement

Answer:

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40. What is neutralization ? Explain an activity to demonstrate neutralization.

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41. Define chemical combination and give an example.

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42. Explain an activity to demonstrate decomposition.

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43. What is chemical decomposition ? Explain with an example.

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44. What will happen when calcium carbonate was heated?

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45. Show that lead nitrate on heating produces nitrogen dioxide.

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46. Explain how decomposition reaction takes place.

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47. Explain the process of electrolysis of water.

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48. How do you separate O_2 and H_2 from water in your chemical laboratory?

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

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50. What changes do you observe when silver bromide exposed to sunlight?

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51. How do you demonstrate displacement reaction?

52. The gas liberated when zinc reacts with dilute HCI is

53. Explain 'displacement reaction' with an activity.

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54. How do metal displaces hydrogen from acids? Explain with an activity.

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55. Describe the reaction of iron with Copper sulphate through an activity.

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56. How do you prove that iron is more reactive than copper?

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57. Write an activity to each of the following chemical reaction.

B) Chemical displacement reaction.

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58. Define double displacement reaction and give an example.

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59. Take a pinch of lead nitrate and dissolve in 5.0 ml of distilled water in a test tube and add a pinch of KI solution to it. What reactions do you observe?

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60. Take a pinch of lead nitrate and dissolve in 5.0 ml of distilled water in a test tube and add a pinch of KI solution to it. Which type of reaction was it?

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61. Take a pinch of lead nitrate and dissolve in 5.0 ml of distilled water in a test tube and add a pinch of KI solution to it. Write chemical equation to this reactions.

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62. Prove Oxidation and Reduction reactions with an experiment.

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63. Explain redox reactions with an experiment.

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64. Do you get the same result if the conical flask is not closed?

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65. Recall the burning of magnesium ribbon in air. Do you think mass is conserved during this reaction?

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66. 100g. of mercuric oxide decomposes to give 92.6g. of mercury and 7.4g. of oxygen. Let us assume that 10g. of oxygen reacts with 125g. of mercury to give mercuric oxide. Do

these values agree with the law of constant proportions?

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67. Discuss with your friends if the carbon dioxide that you breathe out and the carbon dioxide they breathe out are identical. Is the composition of the carbon dioxide of different sources same?

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68. Which postulate of Dalton's theory is the result of the law of conservation of mass?

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69. Which postulate of Dalton's theory can explain the law of constant proportions?

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70. Where does the matter charcoal go?

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71. Wet clothes dry after sometime – where does the water go? What happens to magnesium on burning it in air?

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72. What happens to sulphur on burning it in air?

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73. Do you think that a chemical reaction has taken place in the flask? Give reasons. Do the weights of the flask and its contents change during activity?

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74. What difference do you observe in percentage of copper, carbon and oxygen in two samples? Are elements also made of atoms?

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75. How do we write the symbols for calcium, chlorine, chromium ?

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76. Would you be able to recognise the elements of the table -2, have symbols of this category?

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77. Why do some elements be monoatomic?

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78. Why do some elements form diatomic or triatomic molecules? Why do elements have different atomicities?

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79. What is valency?

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80. Can you write the formula of carbon dioxide and carbon monoxide? Try to write formula for them as we have done in case of water molecule.

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81. How many molecules are there in 18 grams of water? How many atoms are there in 12

grams of carbon?

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82. Did you notice the colour coating on silver and copper articles?

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83. How did the element hydrogen get its name?

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84. What is an atom?

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85. What is an Avagadro number? What is its value?

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86. Father of modern chemistry is.....

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87. What is the law of conservation of mass according to chemical equation?

Watch Video Solution

88. Who proposed Law of conservation?

Watch Video Solution

89. State the following

law of constant proportions.

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90. Define chemical combination and give an example.

Watch Video Solution

91. Give an example for decomposition reaction.

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

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

Watch Video Solution

94. Define oxidation and reduction. ? Give one example to each.

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

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96. Why the apples, pears, bananas, etc. change their colour when they cut nd exposed to air?

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

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98. What is Galvanizing?

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99. What is an alloy ? Give two examples for alloys.

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100. What type of reaction is rancidity?

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

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

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

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104. What are new substances formed due to decomposition of lead nitrate?

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105. What are antioxidants?

Watch Video Solution

106. Which type of reaction involved when silver bromide is exposed to sunlight?

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107. $NH_4Cl \rightarrow NH_3 + HCl$. Which type of reaction is the ?

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108. Which chemical reaction is involved in the corrosion of iron?

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109. 0.24 g sample of compound of oxygen and boron was found by analysis to contain 0.144 g of oxygen and 0.096 g of boron. Calculate the percentage composition of the compound by weight.

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

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

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112. Compare displacement reaction and Double displacement reaction.

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113. 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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114. Who is called as the father of modern chemistry? What are his main contributions?

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115. Law of conservation of mass was proposed by

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116. State the following law of constant proportions.

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117. What are the Dalton's proposals about the nature of matter ?

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118. What is the proposal of Indian sage kanada, about atom?

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119. How elements got their names? Explain all examples.

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120. What is the use of symbols for elements?

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121. What are the characteristics of a symbol?

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122. Define the following terms.

Atomicity

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123. Define valaency .

Watch Video Solution

124. Define Ions

Watch Video Solution

125. Define element and compound. Give examples.

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126. What is atomic mass?

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127. How molecules are formed?

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128. Mohith said "H_2 differs from 2H." Justify.

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129. Explain the method of writing a formula to a compound using criss-cross method, with the help of an example.

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130. Write down the formulae of these compounds, using criss-cross methods?

Sodium Sulphide

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131. Define the terms : Molecular mass.

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132. Define the terms : Formula unit mass

Watch Video Solution

133. Define the terms : Mole.

Watch Video Solution

134. Define the terms : Molecular mass.

Watch Video Solution

135. What are the main postulates of Dalton's atomic theory? (OR)

Write the postulates of Dalton's Atomic theory.

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136. What is atomicity?

Watch Video Solution

137. Why do elements have different atomicities?

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138. What is anion ?

Watch Video Solution

139. How many types of ions exists ?

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140. Give examples to different net charged ions ?

Watch Video Solution

141. When do we calculate formula unit mass?

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142. 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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143. 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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144. 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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145. 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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146. What are the types of chemical reactions? Give examples to each.

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147. Write difference between oxidation and reduction reactions.

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148. Give tw0 example for chemical reactions in which precipitate is formed ?

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149. What does one mean by exothermic and endothermic reactions? Give examples.

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150. What is an alloy ? Give two examples for alloys.

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

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152. What do you mean by precipitation reaction ?

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153. How would you write 2 molecules of Oxygen and 5 molecules of Nitrogen ?

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

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155. Explain rancidity.

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156.

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

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

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157. Which are known as molecules ?

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158. Expand IUPAC.

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

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160. 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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161. What is the difference between 2N and N_2 ?

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162. Mohan said "O_2 differs from O," Do you agree? Justify.

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163. The atomic number (Z) of an element is 6. name the element.

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164. Write any one precautions in doing the experiment chromatography.

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165. In a class, a teacher asked students to write the molecular formula of oxygen. Shamita wrote the formula as O_2, and Priyanka as O. Which one is correct? State the reason.

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166. Anitha wrote the formula for oxygen molecule as 2O. Is it correct or not? Why?

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167. Ravi wrote the symbols for sodium as “S” and symbol for potassium as “P”.Is it correct or not ?why?

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168. Dheeraj argued that number of molecules in 18 units of water and 18 grams of wateris same .Is it correct or not ?Why ?

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169. What is atomic mass?

Watch Video Solution

170. What is the molecular formula of water ?

Watch Video Solution

171. What is the molecular mass of water?

Watch Video Solution

172. What are the units of molecular mass ?

Watch Video Solution

173. Define the terms : Mole.

Watch Video Solution

174. What is the molecular mass of water?

Watch Video Solution

175. What are.the units of molar mass?

Watch Video Solution

176. How many molecules are there in 18 grams of water?

Watch Video Solution

177. How many molecules are there in 18 grams of water?

Watch Video Solution

178. We write symbol of water as H_2O. State why should not we write it `HO2' .

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179. A shiny brown coloured element 'X' on heating in air becomes black in colour. Can you predict the element 'X' and the black coloured substance formed? How do you support your predictions?

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180. A student was given the following substances and was asked to show types of chemical reactions through experiment. Write how he would have done that.

Copper sulphate solution, barium chloride solution, ferrous sulphate crystals, Iron nails, calcium oxide, water.

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

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182. Is 'Na' an element or compond? Why

Watch Video Solution

183. Is O_2 an element or compound? Why

Watch Video Solution

184. "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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185. Take two beakers and prepare lead nitrate aqueous solution and potassium iodide aqueous solutions. What are the colours of

the solutions? Now mix them in another beaker. What happens? What type of chemical reaction it is? What are products?

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186. Latha take some quantity of powder of a substance in a test tube. Heated it with spirit lamp. A gas was liberated. She sends the gas into another test tube. The colour of solution in the second test tube turned into milk white. Which substance was heated? Which gas is

liberated? What was the solution taken in second test tube? Which type of chemical reactions involved the experiment?

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187. A light-yellow colour substance (some quantity) on a watch glass light. It changes into gray colour substance. What is the light-yellow colour substance? What is the gray colour substance?Which type of chemical

reaction it is? Write the chemical equation for the reaction

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188. What is the unit of atomic mass?

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189. On the basis of molecular weights of $NaOH$ and H_2O, which is heavier?

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190. Collect the symbols of various elements.

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191. Give examples to different net charged ions ?

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192. Prepare formulae for compounds by using Criss- Cross methods.

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193. Make a chart showing the concept of mole.

Watch Video Solution

194. Draw the diagram of arrangement of appartmentus in the activity of heating of calcium carbonate.

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195. Draw the diagram of " Electrolysis of water".

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196. Draw the diagram of reduction of copper oxide to copper and label it.

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197. Write any two compounds that are used in your house.

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198. Molecular mass of H_2SO_4 is

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199. The formula unit mass of sodium chloride is-

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200. How can you prevent the spoiling of food?

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201. How can you identify the corrosion of metals?

Watch Video Solution

202. Where do you observe oxidation process in your daily life ?

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203. What do you do to prevent rusting of copper and silver articles ?

 Watch Video Solution

204. What are the effects of oxidation on everyday life?

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205. Formula of calcium hydroxide is $Ca(OH)_2$ and zinc phosphate is $Zn_3(PO_4)_2$, then write the formula of calcium phosphate.

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206. Which instrument is used to calculate the atomic mass exactly?

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207. Which metal is used in the manufacture of Diwali crackers?

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208. Balance the following chemical equation.

$C_2H_6 + O_2 \rightarrow CO_2 + H_2O$

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209. When the particles of a substance contain only one type of atoms, that substance is called a/an

A. molecule

B. element

C. compound

D. atom

Answer:

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210. Combination of atoms of same elements is known as

A. molecule

B. element

C. compound

D. atom

Answer:

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211. IF atoms of different elements combine then.....is formed.

A. molecule

B. element

C. compound

D. atom

Answer:

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212. Symbol of potassium

A. Pb

B. Na

C. Fe

D. K

Answer:

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213. The latin name of the element Tungsten is

A. Natrium

B. Kalium

C. Wolfram

D. Cuprum

Answer:

214. Correct method of representing a symbol

A. BE

B. he

C. al

D. Cr

Answer:

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215. Which of the following is octatomic?

A. nitrogen

B. oxygen

C. carbon

D. sulphur

Answer:

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216. The valency of sulphate is

A. $2-$

B. $2+$

C. $3-$

D. $3+$

Answer:

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217. In NH_4Cl the cation is

A. Cl

B. NH_4

C. NH_4Cl

D. None

Answer:

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218. Chemical formula of aluminium sulphate is

A. Al_2SO_4

B. $(Al_2)_2(SO_4)_3$

C. $Al_2(SO_4)_3$

D. $AlSO_4$

Answer:

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219. Molecular mass of H_2SO_4 is

A. 98 u

B. 89 u

C. 49 u

D. 106 u

Answer:

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220. Molar mass of 1.5055×10^{23} number of calcium atoms

A. 20 gm

B. 40 gm

C. 10 gm

D. 30 gm

Answer:

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221. Convert into moles : 8 gm of Mg.

A. 0.3

B. 3

C. 2

D. 0.2

Answer:

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222. Among the following which element has more number of atoms?

A. Sulphur

B. Calcium

C. Nitrogen

D. Carbon

Answer:

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223. Mass is neither created nor destroyed during a chemical reaction " This is known as .....

A. Law of constant proportions

B. Law of multiple proportions

C. Law of conservation of mass

D. Law of conservation of energy

Answer:

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224. Dalton proposed atomic theory based on.....

A. Law of conservation

B. Law of constant proportions

C. Both A & B

D. Neither A or B

Answer:

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225. According to Dalton atom is .....particle.

A. indivisible

B. tiny

C. both A & B

D. none of these

Answer:

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226. The word atom is derived from a Greek word " atmos" means.....

A. indivisible

B. divisible

C. both A & B

D. none of these

Answer:

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227. ..... are the building blocks of all matter.

A. Atoms

B. Molecules

C. Elements

D. Compounds

Answer:

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228. Latin word for water is.....

A. hydro

B. oxy

C. Helios

D. none of these

Answer:

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229. The Latin word for acid is-

A. hydro

B. oxy

C. helios

D. atomic

Answer:

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230. Symbol of Beryllium is.....

A. Ba

B. Be

C. Br

D. B

Answer:

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231. Symbol of nitrogen is.....

A. Ni

B. Na

C. N

D. No

Answer:

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232. Symbol for gold.....

A. G

B. Ga

C. Ge

D. Au

Answer:

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233. Cl_2 is the formula for.....

A. Chlorine

B. Cadmium

C. Chromium

D. Calcium

Answer:

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234. We are protected by shielding the earth from some harmful rays of the sun by.....

A. atmosphere

B. ozone layer

C. clouds

D. sky

Answer:

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235. The number of atoms constituting a molecule is known as its.....

A. valency

B. atomicity

C. atomic number

D. mass number

Answer:

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236. The atomicity of sodium is.....

A. 1

B. 2

C. 3

D. 4

Answer:

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237. The combining capacity of one atoms with another atom is its.....

A. valency

B. atomicity

C. atomic number

D. mass number

Answer:

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238. Valency of Argon is.....

A. 0

B. 1

C. 2

D. 3

Answer:

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239. Valency of carbon is .....

A. 1

B. 2

C. 3

D. 4

Answer:

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240. A positively charged ion is called.....

A. radical

B. anion

C. cation

D. complex ion

Answer:

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241. A negatively charged ion is called.....

A. radical

B. anion

C. cation

D. multiple ion

Answer:

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242. In NH_4OH the anion is.....

A. OH^-

B. NH_4^+

C. NH_3^+

D. NH^-

Answer:

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243. Standard reference for measuring atomic masses of other elements is .....

A. atomic mass of carbon – 12

B. atomic mass of carbon – 14

C. Atomic mass of oxygen – 16

D. atomic mass of oxygen – 18

Answer:

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244. The number of times one atom of given element is heavier than $1/12$ th part of atomic mass of carbon-12 is called as.....

A. valency

B. atomicity

C. atomic mass

D. atomic number

Answer:

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245. Atomic mass of Magnesium is.....

A. 8

B. 10

C. 12

D. 24

Answer:

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246. Formula of silver nitrate.....

A. $AgNO_2$

B. $AgSO_4$

C. $AgNO_3$

D. $Ag(NO_3)_2$

Answer:

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247. Molecular mass of sodium carbonate is.....U.

A. 108

B. 104

C. 110

D. 106

Answer:

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248. Avogadro constant N_A=.....

A. 6.022×10^{20}

B. 6.022×10^{21}

C. 6.022×10^{22}

D. 6.022×10^{23}

Answer:

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249. Molar mass of water=.....U.

A. 16

B. 18

C. 20

D. 22

Answer:

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250. Number of particles present in 32 g of oxygen molecule are.....

A. 6.022×10^{20}

B. 3.011×10^{23}

C. 6.022×10^{22}

D. 6.022×10^{23}

Answer:

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251. Convert in to moles:

22 g of carbon dioxide

A. 1

B. 0.25

C. 0.75

D. 0.5

Answer:

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252. The valency of copper in Cu_2O is.....

A. $+1$

B. $+2$

C. $+3$

D. -1

Answer:

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253. Number of particles in 7.75 g of phosphorous is.....

A. 6.022×10^{23}

B. 3.011×10^{23}

C. 1.5055×10^{23}

D. 6.022×10^{22}

Answer:

Watch Video Solution

254. Symbol of nitrate is.....

A. NO_3^-

B. NO_2^-

C. N^{3-}

D. N^-

Answer:

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255. Statement -I The symbol of chloride ion is Cl^-.

Statement -II: The symbol of ammonium ion is NH_4^+.

A. Both the statements are true

B. Statement – I is true and statement – II is false

C. Statement – I is false and statement – II is true

D. Both the statements are false

Answer:

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256. Symbol of sodium ion is.....

A. Na

B. Na^{+2}

C. Na^{3+}

D. Na^{+}

Answer:

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257. The formula of Aluminium Carbonate is.....

A. $AlCO_3$

B. Al_2CO_3

C. $Al_2(CO_3)_3$

D. $Al(CO_3)_2$

Answer:

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258. The symbol of Zinc ion is.....

A. Zn

B. Zn^+

C. Zn^{2+}

D. Zn^{3+}

Answer:

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259. Which of the following statement is not given by Dalton? Statement (A) : If mass was to be conserved, then all elements must be made up of extremely small particles. Statement (B) : If law of constant proportion is to be followed,

the particles of same substance be either same or different.

A. A only

B. B only

C. both A & B

D. none

Answer:

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260. Who is correct?

Srinu: Elements are made up of atoms.

Mohan: Atoms are made of elements.

A. Srinu

B. Mohan

C. Both

D. Neither Srinu nor Mohan

Answer:

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261. Assertion (A): The atomic mass of magnesium is 24.

Reason (R): Magnesium atom is 24 times heavier than that of $1/12$ of mass of carbon.

A. A and R are true, A is supported by R

B. A and R are true, A is not supported by R

C. A and R are false

D. A is true but R is false

Answer:

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262. Assertion (A): Atomic mass has no units.

Reason (R): Atomic mass is an expression of ratio.

A. A and are true, A is supported by R

B. A and R are true, A is not supported by R

C. A and R are false

D. A is true but R is false

Answer:

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263. An iron rod changed into iron oxide by rusting. Guess how the weights before and after rusting of the iron rod are changed.

If a= weight of the iron rod

b= weight of the iron oxide

A. $a > b$

B. $b > a$

C. a = b

D. we cannot say

Answer:

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264. In the experiment of "To prove law of conservation of mass", Manoj found that weight of 'Mg' in a closed test tube is not equal to the weight of 'MgO' after burning. The reason may be

A. 'Law of conservation of mass ' is not applicable to some chemical changes

B. Some gas was escaped in this experiment

C. He was used simple balance to weight.

D. Above all

Answer:

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265. $CO : 1 : 1 : : CO_2 :$ .....?

A. 0.042361111111111

B. 0.084027777777778

C. 0.043055555555556

D. 0.085416666666667

Answer:

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266. Molecules in water is H_2O then molecules in the Hydrogen is

A. H

B. H_2

C. A or B

D. No molecules

Answer:

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267. Why did symbol of copper taken as 'Cu'?

A. Latin name of copper is cuprum

B. Original spelling of copper is cupper.

C. Symbols of all metals should be taken in two letters.

D. Above all

Answer:

268. Statement (A) : Symbol of carbon is 'C' whereas symbol of calcium is 'Ca'. Reason (R) : Eventhough carbon and calcium have 'C' as its initial, carbon occurs first in periodic table. So,

its symbol was taken as ‘C’ and calcium symbol was taken as ‘Ca’.

A. Both A and R are true

B. Both A and R are false

C. A is true but R is false

D. A is false but R is true

Answer:

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269. Generally all inert gases like , He,Ne,Ar,Kr,Xe are available as monoatomic elements.

Guess the reason.

A. They are more reactive

B. Their valency is zero

C. Their valency is less than 8

D. They are unstable

Answer:

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270. IF $'x^{-1}'$ and Na'x' then 'x' may be

A. carbon

B. chromium

C. chlorine

D. copper

Answer:

Watch Video Solution

271. The valencies of 'Mg' and 'O' are.....respectively in MgO.

A. 1, 1

B. 2, 2

C. 1, 2

D. 2, 1

Answer:

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272. ' X_2 Y','X' H 'Y', 'X' OH

Guess X and Y.

A. X = Na , Y = OH

B. X = Na , $Y = CO_3$

C. $X = CO_3, Y = Zn$

D. X = Zn , $Y = CO_3$

Answer:

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273. By using Ag^+, Cl^-, Na^+, OH^-

How many substance can be formed?

A. 2

B. 3

C. 4

D. 6

Answer:

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274. Molar mass of molecule x= 2 gr

Molar mass of molecule y= 32 gr

Molar mass of molecule x_2y=18 gr

Predict x and y.

A. $x = H_2$, $y = O_2$

B. $x = O_2$, $y = H_2$

C. $X = H_2$, $y = Cl_2$

D. $x = Cl_2$, $y = H_2$

Answer:

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275. No. of molecules in 44 grams of CO_2 is equal to

A. no. of molecules in 18 gr of H_2O

B. No. of molecules in 2 grams of H_2

C. no. of molecules in 32 grams of O_2

D. any one of the above

Answer:

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276. To prove 'conservation of the mass' what should be weight?

A. weight of lead nitrate

B. weight of potassium iodide

C. weight of lead iodide and potassium nitrate

D. above all

Answer:

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277. In the given experiment, this precaution must be taken

A. put the cork tightly

B. measure components accurately

C. while measuring leave the apparatus freely

D. above all

Answer:

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278. Law of conservation of mass was proposed by

A. Antoine Lavoisier

B. Joseph L Proust

C. John Dalton

D. Landolt

Answer:

Watch Video Solution

279. Law of conservation of mass was experimentally verified by

A. Antoine Lavoisier

B. Joseph L Proust

C. John Dalton

D. Landolt

Answer:

Watch Video Solution

280. Law of constant proportions was proposed by

A. Antoine Lavoisier

B. Joseph L Proust

C. John Dalton

D. Landolt

Answer:

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281. What is the original name of Kanada, an Indian sage, who proposed anu and paramanu?

A. Vaishesika Sutra

B. Rishi

C. Kasyapa

D. Bhaskara

Answer:

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282. Initial letter of an element written in capitals should represent that a particular element. This was proposed by

A. John Dalton

B. Landolt

C. John Berzelius

D. Wilhelm Ostwald

Answer:

 Watch Video Solution

283. The word 'mole' was first introduced by

A. John Berzelius

B. Wilhelm ostwald

C. John Dalton

D. Avogadro

Answer:

Watch Video Solution

284. Number of particles present in 9 grams of aluminium

A. 2.007×10^{23}

B. 3.011×10^{23}

C. 18.066×10^{23}

D. 6.022×10^{23}

Answer:

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285. Father of modern chemistry is.....

A. Levoisier

B. Proust

C. Dalton

D. Landolt

Answer:

Watch Video Solution

286. Greek name of sun is.....

A. hydro

B. oxy

C. helios

D. atomic

Answer:

287. The latin name of Mercury is

A. Aurum

B. Cupsum

C. Kalium

D. Hydragyrum

Answer:

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288. O_2 From the given substance select the wrong statement.

A. It is a molecule of oxygen

B. It has two elements

C. It contains two oxygen atoms

D. It is not a compound

Answer:

Watch Video Solution

289. Find the odd one according to their net charge of ion.

A. Hydrogen, sodium, potassium

B. Magnesium, calcium, zinc

C. Aluminium, iron, silver

D. Ammonium, copper, silver

Answer:

290. Antione Lavoisier is appreciable because

A. He proposed the law of conservation of mass

B. He is the father of modern chemistry

C. He proposed the law of constant proportions.

D. A and B

Answer:

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291. Atomic mass can be measured accurately by using the device.

A. Mass spectrometer

B. Light spectrometer

C. Electronic balance

D. None

Answer:

Watch Video Solution

292. No. of atoms in 16 g of oxygen.

A. 6.022×10^{23}

B. 3.011×10^{23}

C. 12.044×10^{23}

D. None

Answer:

Watch Video Solution

293. In a soda water there is 44 grams of CO_2 is mixed with 18 grams of water. The no. of molecules of H_2CO_3 (Soda water) is

A. 6.022×10^{23}

B. 3.011×10^{23}

C. 12.044×10^{23}

D. None

Answer:

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294. Avogadro is appreciable, because he found that one mole of any substance contains.....molecules.

A. 6.2×10^{22}

B. 6.4×10^{19}

C. 6.02×10^{23}

D. Countless

Answer:

Watch Video Solution

295. The great mole concept was introduced by..... And he is appreciable.

A. Avogadro

B. Ostwald

C. Dalton

D. Lavoisier

Answer:

Watch Video Solution

296. Washing soda'is the common name of

A. Na_2CO_3

B. $NaHCO_3$

C. Na_2SO_4

D. Na_3PO_4

Answer:

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297. The correct order in the activity to observe law of conservation of mass is

P. Take 100 ml of silver nitrate solution in a chemical flask and 5 ml of sodium chloride in a

test tube.

Q. Due to reaction between these two while precipitate will form.

R. Add sodium chloride solution to silver nitrate solutions

S. Weight of two and record the sum of their weights

T. After reaction weigh it again and it will be equal to the previous reading.

A. P, R, S, Q, T

B. P, S, R, Q, T

C. P, S, Q, R, T

D. P, S, R, T, Q

Answer:

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298. Uma: mass is neither created nor destroyed during a chemical reaction

Rama: matter is conserved in a chemical reaction.

A. Uma is correct, Rama is incorrect

B. Bot Uma and Rama are correct.

C. Both Uma and Rama are incorrect

D. Uma is incorrect, Rama is correct

Answer:

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299. □ : Sodium chloride :: $Al_2(SO_4)_3$: Aluminium sulphate

A. $NaCO_3$

B. $Na_2(CO_3)_2$

C. $Na(CO_3)_2$

D. Na_2CO_3

Answer:

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300. David: By transfer of electrons atoms- can attain octet

Dravid: By sharing of electrons atoms- can attain oclet

A. David incorrect, Dravid correct

B. Both David and Dravid are incorrect.

C. Both David and Dravid are correct.

D. David correct, Dravid incorrect

Answer:

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301. A given chemical substance always contains the same elements combined in a fixed proportion by mass. Guess the

compounds formed in the ratio of $1:1$ and $1:2$ by carbon and oxygen.

A. CO_2, CO

B. CO, CO_3

C. CO_2, CO_3

D. CO, CO_2

Answer:

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302. A neutral metal atom becomes dipositive ion by loosing two electrons. In the same way a neutral non-metal atom becomes uni-negative ion by gaining one electron. The formula of a compound which is formed by these two ions is

A. m_2x

B. m_2x_1

C. m_2x_3

D. m_2x_2

Answer:

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303. We can test the law of conservation of mass by the reaction between barium chloride and sodium sulphate.While doing the experiment, one of the precautions you have taken is

A. Reactants should be taken in solid state.

B. Cork was not fitted while the reaction is taking place.

C. Common balance is used to weigh the substances.

D. Flask was tilted and swirled for the mixing of two solutions.

Answer:

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304. Based on the above flow chart, generalised statement is P. In any substance the no. of particles in one molė is constant. Q. Irrespective of quantity of a mat-ter, the no. of atoms or molecules in it is constant.R. There is no relation between the mole and the mass of substance.

A. Q only

B. P and Q

C. R only

D. P only

Answer:

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305. In the above flow chart, the number 6.022×10^{23} is

A. Avogadro number (N)

B. Mass number (A)

C. Atomic number (Z)

D. Atomic mass unit (amu)

Answer:

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306. The molecular mass of a substances is the sum of the atomic masses of all the atoms in the molecule of the substance . If the atomic masses of hydrogen, sulphur and oxygen are 1,32 ,16 successively then the molecular mass of sulphuric acid is

A. 98 U

B. 49 U

C. 97 U

D. 89 U

Answer:

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307. Some symbols of elements are based on their English names, Some other are based on their Latin names.Which of the following

elements have symbols based on Latin names?

(i) Sodium (ii) Neon (iii) Gold (iv) Argon

A. i and iii

B. i and iv

C. ii and iv

D. i and ii

Answer:

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308. How many molecules are there in 18 grams of water?

A. 6.02×10^{22}

B. 6.02×10^{23}

C. 6.02×10^{32}

D. 6.02×10^{35}

Answer:

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309. IF valency of MG is '+2' and valency of Sulphate (SO_4) is '-2', then the formula of compound formed by these

A. Mg_2SO_4

B. $Mg(SO_4)_2$

C. $MgSO_4$

D. $Mg_3(SO_4)_2$

Answer:

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310. Homogeneous molecules from the following

A. H_2O

B. N_2

C. N_2O_3

D. $FeSO_4$

Answer:

 Watch Video Solution

311. The common name of hydrogen monoxide is

A. Water

B. Salt

C. Washing Soda

D. Baking Soda

Answer:

 Watch Video Solution

312. Valencies of nitrogen and hydrogen and 3 and 1 respectively. The formula of ammonia molecules formed by these two atoms

A. NH_3

B. NH_4

C. N_3H

D. N_4H

Answer:

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313. P: the atmoicity of Oxygen is 3

Q: The formula of ozone is O_2

A. P – correct, Q – incorrect

B. P – incorrect, Q – correct

C. Both P & Q incorrect

D. Both P & Q correct

Answer:

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314. One of the precautions to be taken in the conduction of experiment on law of conservation of mass is

A. Test tube should not be tilted

B. Test tube should be tilted

C. Test tube should be immersed in the conical flask

D. Test tube should be kept outside the conical flask

Answer:

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315. Ornaments that we wear contains.....

A. Mercury

B. Sodium

C. Calcium

D. Gold

Answer:

Watch Video Solution

316. The latin name of the element Tungsten is

A. Aurum

B. Plumbum

C. Kalium

D. Wolfram

Answer:

Watch Video Solution

317. Molecular formula of Ozone is.....

A. O_3

B. O_2

C. O

D. O_8

Answer:

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