CHEMISTRY

BOOKS - VGS BRILLIANT CHEMISTRY (TELUGU ENGLISH)

PRINCIPLES OF METALLURGY

Exercise

1. Can you mention some articles that are made up of metals?

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2. Do metals exist in nature in the same form as that we use in our daily life?

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3. Have you ever heard the words like ore, mineral and metallurgy?

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4. Do you know how are the names of certain families of periodic table derived ?

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5. List three metals that are found in nature as oxide ores.

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6. List three metals that are found in nature in uncombined form.

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7. Write a note on dressing of ore in metallurgy.

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8. What is concentration or dressing?

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9. How to choose a physical method in enriching of the ore?

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10. Explain the process of hand picking.

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11. Write about the given process : Hydrolic Washing,

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12. What is the role of depressant in froth floatation?

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13. Draw the diagram showing: Magnetic separation.

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14. How do metals occur in nature? Give some examples for any two types of minerals.

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15. When do we use magnetic seperation method for concentration of an ore? Explain with an example.

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16. What is the difference between roasting and calcination? Give one example for each.

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17. Draw the diagram showing: Froth floatation

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18. Draw the diagram showing: Magnetic separation.

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19. Draw a neat diagram of Reverberatory furnace and label it neatly.

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20. Draw the diagram of the furnace, which is generally used for roasting.

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21. Magnesium is an active metal. If it occurs as a chloride in nature, which method of reduction is suitable for its extraction?

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22. Mention two methods which produce very pure metals from impure metals.

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23. Which method do you suggest for extracting of high reactivity metals?

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24. Explain thermite process and mention it's applications in our daily life.

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25. Where do we use handpicking and washing methods in our daily life? Give examples. How do you correlate these examples with enrichment of ore?

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26. The impurity present in the ore is called as:

A. Gangue

B. Flux

C. Slag

D. Mineral

Answer:

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27. Which of the following is carbonate ore?

A. Magnesite

B. Bauxite

C. Gypsum

D. Galena

Answer:

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28. Which of the following is the correct formula of gypsum?

A. $CuSO_4 \cdot 2H_2O$

B. $CaSO_4 \cdot ½H_2O$

C. $CuSO_4 \cdot 5H_2O$

D. $CaSO_4 \cdot 2H_2O$

Answer:

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29. The oil used in froth flotation process is

A. Kerosene oil

B. Pine oil

C. Coconut oil

D. Olive oil

Answer:

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30. Froth flotation is the method used for purification of----------ore.

A. Sulphide

B. Oxide

C. Carbonate

D. Nitrate

Answer:

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31. Galen is an ore of?

A. Zn

B. Pb

C. Hg

D. Al

Answer:

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32. The metal that occurs in the native form is?

A. Pb

B. Au

C. Fe

D. Hg

Answer:

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33. Most abundant metal in the earth's crust is

A. Silver

B. Aluminium

C. Zinc

D. Iron

Answer:

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34. The reducing agent in thermite process is?

A. AL

B. Mg

C. Fe

D. St

Answer:

Watch Video Solution

35. The purpose of smeltimg an ore is to---------it.

A. Oxidise

B. Reduce

C. Neutralise

D. None of these

Answer:

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36. Suggest an experiment to prove that the presence of air and water are essential for corrosion. Explain the procedure.

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

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Watch Video Solution

38. Collect information about extraction of metals of low reactivity silver, platinum and gold and prepare a report.

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39. How do you classify ores based on their formula?

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40. Do you agree with the statement "All ores are minerals but all minerals need not be ores".Why?

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41. How the metals are present in nature?

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42. What metals can we get form the ores ?

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43. Can you arrange these metals in the order of their reactivity?

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44. When ice melts ,its temparature

A. Remains constant

B. Increases

C. Decreases

D. can not say

Answer:

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45. Can you think how do we get these metals from their ores?

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46. Does the reactivity of a metal and form of its ore(oxides, sulphides, chlorides, carbonates, sulphates) has any relation with process of extraction?

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47. How are metals extracted from mineral ores?

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48. Do you know why corrosion occurs?

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49. What does this tell us about the conditions under which iron articles rust?

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50. What is the role of furnace in metallurgy?

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51. How do furnaces bear large amounts of heat?

Watch Video Solution

52. Do all furnaces have same structure?

Watch Video Solution

53. Draw a neatly labelled diagram of a neuron.

Watch Video Solution

54. Arrange the metals: Fe, Na, Ag and Zn in Increasing order of their chemical reactivity

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55. What are the preventive methods do you take for rusting iron materials?

Watch Video Solution

56. What is the difference between roasting and calcination? Give one example for each.

Watch Video Solution

57. What are the essential condition that iron articles get rust ?

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58. 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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59. Predict, what happens in the field of domestic use of metals if alloys were not discovered.

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60. Give an example with the chemical equation for the reduction of ores using more reactive metals.

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61. Write two precautions to prevent corrosion of metals in your daily life.

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62. Observe the table and answer the following question: Which of the above metal's ore are concentrated by using magnetic separation ?

High reactivity	Moderate reactivity	Low reactivity
K, Na, Ca, Mg, Al	Zn, Fe, Pb, Cu	Ag, Au

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63. What are the preventive techniques used in corrosion of metals?

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64. State the methods used for the purification of crude metals. Explain in which context these methods are used.

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65. Four metals A, B, C and D are in turn added to the following solutions one by one .The observations made are tabulated below. which is the most reactive metals? Why?

Metal	Iron (II) Sulphate	Copper (II) Sulphate	Zinc Sulphate	Silver Nitrate
A	No reaction	Displacement	–	–
B	Displacement	–	No reaction	–
C	No reaction	No reaction	No reaction	Displacement
D	No reaction	No reaction	No reaction	No reaction

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66. Four metals A, B, C and D are in turn added to the following solutions one by one .The observations made are tabulated below. which is the

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A	No reaction	Displacement	–	–
B	Displacement	–	No reaction	–
C	No reaction	No reaction	No reaction	Displacement
D	No reaction	No reaction	No reaction	No reaction

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67. Four metals A, B, C and D are in turn added to the following solutions one by one .The observations made are tabulated below. which is the most reactive metals? Why?

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A	No reaction	Displacement	–	–
B	Displacement	–	No reaction	–
C	No reaction	No reaction	No reaction	Displacement
D	No reaction	No reaction	No reaction	No reaction

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

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

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69. 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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70. The method suitable for concentration of the sulphide ores is

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71. Define Metallurgy

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72. What is the major source of metals?

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73. What are minerals?

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74. What is an ore?

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75. Why do we call oxygen-sulphur group chalcogen family?

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76. Arrange the following metals in descending order of their reactivity: K, Zn, Ag, Fe, Ca, Au, Na, Pb.

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77. What is concentration or dressing?

Watch Video Solution

78. How to choose a physical method in enriching of the ore?

Watch Video Solution

79. Give an example for reduction of metal oxide with carbon.

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80. Give an example for reduction of oxide ore with CO.

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81. Refining is

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82. Mention some important methods of refining.

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83. What is the flux through the plane taken parallel to the field?

Watch Video Solution

84. What is the role of furnace in metallurgy?

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85. Why do we add impurities to electrolyte during electrolytic extraction of metals?

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86. How do various metals in activity series react with chlorine on heating?

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87. How do you know the reactivity of metals with chlorine decreases from top to bottom?

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88. Is silver is mineral or Ore? Justify your answer.

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89. What is Gangue?

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90. Where are used the thermite process in daily life?

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91. Give any two examples of ores with their formulas.

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

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93. Write the names and formulae of any two ores of iron

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94. What is Gangue?

Watch Video Solution

95. Silicon is metalloid. How do you support this?

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96. Mention the most important metals and non-metals from the following products. annapurna salt,liquid uses in thermometer,lead of the pencil,chlorophyll,filament in electric buld,enamel layer on teeth.

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97. Mention the most important metals and non-metals from the following products : Liquid used in thermometer.

Watch Video Solution

98. Mention the most important metals and non-metals from the following products : Lead of the pencil.

Watch Video Solution

99. Mention the most important metals and non-metals from the following products : Chlorophyll.

Watch Video Solution

100. Mention the most important metals and non-metals from the following products : filament in electric bulb.

Watch Video Solution

101. Mention the most important metals and non-metals from the following products : Enamel layer on teeth.

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102. Give an example of auto reduction of sulphise ores.

Watch Video Solution

103. Explain the process of hand picking.

Watch Video Solution

104. What is the role of washing in enriching the ore?

Watch Video Solution

105. Write the reactions inside the blast furnace.

Watch Video Solution

106. Do all furnaces have same structure?

Watch Video Solution

107. How do various metals in activity series react with steam?

Watch Video Solution

108. How do various metals in activity series react with dilute strong acids?

Watch Video Solution

109. How do you reduce purified ore to the metal of the top of activity series? Explain.

Watch Video Solution

110. What are the preventive techniques used in corrosion of metals?

Watch Video Solution

111. Give some examples for corrosion.

Watch Video Solution

112. What is 22 carat gold? Why it is preferred for making jewellery?

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113. Write about electrolysis of NaCl.

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114. Identify the metal present in the following Ores : Epsom salt,

Watch Video Solution

115. Identify the metal present in the following Ores : Horn silver,

Watch Video Solution

116. Identify the metal present in the following Ores : Cinnabar,

Watch Video Solution

117. Identify the metal present in the following Ores : Galena

Watch Video Solution

118. What is meant by extraction of metals?

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119. Write the chemical equations of thermite reactions.

Watch Video Solution

120. What is the difference between roasting and calcination? Give one example for each.

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121. What is an ore? On what basis a mineral is chosen as an ore?

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122. The results of reactions of metals A, B, C, D, E with different solutions are given in the table below. Observe the table and write answers. Which

is the least reactive metal ? Why ?

Metal	Solution				
	$FeSO_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$	$Al(SO_4)_3$
A	No reaction	No reaction	No reaction	A layer is formed	No reaction
B	An ash coloured substance settled on the metal	A light brown layer is formed on the metal	No reaction	A layer is formed	No reaction
C	No reaction	No reaction	No reaction	No reaction	No reaction
D	No reaction	A light brown layer is formed	No reaction	A layer is formed on the metal	No reaction
E	A substance settled on the metal	A light brown layer is formed	Fresh layer is formed	Fresh layer is formed	No reaction

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123. The results of reactions of metals A, B, C, D, E with different solutions are given in the table below. Observe the table and write answers. Which metals form brown layer ?

Metal	Solution				
	$FeSO_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$	$Al(SO_4)_3$
A	No reaction	No reaction	No reaction	A layer is formed	No reaction
B	An ash coloured substance settled on the metal	A light brown layer is formed on the metal	No reaction	A layer is formed	No reaction
C	No reaction	No reaction	No reaction	No reaction	No reaction
D	No reaction	A light brown layer is formed	No reaction	A layer is formed on the metal	No reaction
E	A substance settled on the metal	A light brown layer is formed	Fresh layer is formed	Fresh layer is formed	No reaction

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124. The results of reactions of metals A, B, C, D, E with different solutions are given in the table below. Observe the table and write answers. Arrange the metals A, B, C, D, E in the order of their reactivity ?

Metal	Solution				
	$FeSO_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$	$Al(SO_4)_3$
A	No reaction	No reaction	No reaction	A layer is formed	No reaction
B	An ash coloured substance settled on the metal	A light brown layer is formed on the metal	No reaction	A layer is formed	No reaction
C	No reaction	No reaction	No reaction	No reaction	No reaction
D	No reaction	A light brown layer is formed	No reaction	A layer is formed on the metal	No reaction
E	A substance settled on the metal	A light brown layer is formed	Fresh layer is formed	Fresh layer is formed	No reaction

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125. Classify the following ores as oxides, sulphides, chlorides, carbonates and sulphates and write their formulae. Bauxite, Copper Iron Pyrites, Zine Blende, Magnesite, Epsom salt, Horn Silver, Pyrolusite, Haematite, Zincite, Rock salt, Cinnabar, Magnetite, Galena, Gypsum, Limestone, Carnallite.

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126. How many stages are involved in the formation of urine ?

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127. Show the reactivity of metals with oxygen, water, steam, dilute strong acids and chlorine in tabular form

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128. The extraction of metals from oxide ores involve

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129. What are the different methods of concentration of ores?

Watch Video Solution

130. How do you extract metals at the bottom of the activity series?

Watch Video Solution

131. Write the process of extraction of metals belongs to : moderately reactive series

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132. Collect information about extraction of metals of low reactivity silver, platinum and gold and prepare a report.

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133. Explain purification or refining of crude metal.

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134. Wrote the short notes on:distillation

Watch Video Solution

135. Wrote the short notes on: poling

Watch Video Solution

136. Write the short notes on:liquation

Watch Video Solution

137. Wrote the short notes on:electrolysis

Watch Video Solution

138. Name the common elements present in the anode mud in the eletrolytic refining of copper.

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139. What is metallic corrosion ? Explain it with respect to iron corrosion.

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140. Explain the process involved in corrosion.

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141. How do you prepare washing soda ? What are its uses ?

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142. What is the role of furnace in metallurgy?

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143. Describe the reaction of various metals in activity series with oxygen.

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144. How do you extract metals in the middle of activity series?

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145. How do you extract metals at the bottom of the activity series?

Watch Video Solution

146. Why alloyong is preferred for metals? Explain with examples.

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147. What is activity series?

Watch Video Solution

148. What is activity series?

Watch Video Solution

149. What is activity series?

Watch Video Solution

150. The reaction (s) which does (da) occur in the blast furnace in the extraction of iron from hacmatite are is (are)

Watch Video Solution

151. Draw the diagram of blast furnace and label it parts.

Watch Video Solution

152. Draw the diagram of blast furnace and label it parts.

Watch Video Solution

153. Name the ores which are concentrated by froth floatation process.

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154. Write short notes on : roasting, calcination and smelting.

Watch Video Solution

155. Write short notes on : roasting, calcination and smelting.

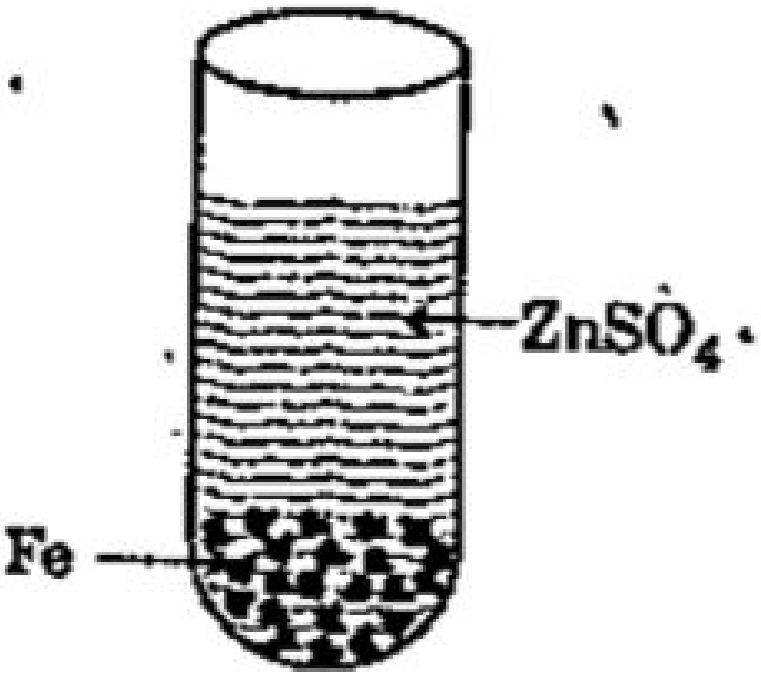
Watch Video Solution

156. Write short notes on : roasting, calcination and smelting.

Watch Video Solution

157. 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 on 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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158. The ore of calcium metal among the following is

A. Bauxite

B. Lime stone

C. Rock salt

D. Haematite

Answer:

Watch Video Solution

159. Limestone is an ore is _____

A. Na

B. Ca

C. Mg

D. Al

Answer:

Watch Video Solution

160. Froth floatation process is used to concentrate impurities of the ore is ____

A. Sulphide

B. Oxide

C. Chloride

D. Hydride

Answer:

Watch Video Solution

161. Bronze is an alloy of

A. copper and zinc

B. copper and tin

C. zinc and tin

D. calcium and tin

Answer:

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162. A mineral from which a metal can be extracted economically and conveniently is called

A. Minerals

B. Ores

C. Gangue

D. Flux

Answer:

Watch Video Solution

163. The formula of carnalllite is

A. $KCl \cdot MgCl_2 \cdot 6H_2O$

B. $MgCO_3$

C. $MgSO_4 \cdot 7H_2, O$

D. $CaCO_3 . MgCO_3,$

Answer:

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164. -------- group are called chalcogenes.

A. 13th

B. 14th

C. 15th

D. 16th

Answer:

Watch Video Solution

165. During the electrolysis of sodium chloride ---------- gas liberates at the anode.

A. Hydrogen

B. Chlorine

C. Oxygen

D. Nitrogen

Answer:

Watch Video Solution

166. ___is used to convert sulphide ore into oxide ore.

A. Roasting

B. Caleination

C. Smelting

D. None of these

Answer:

Watch Video Solution

167. The ore of mercury is ___

A. Galena

B. Bauxite

C. Haematite

D. Cinnabar

Answer:

Watch Video Solution

168. Low boiling metals are purified by-----method

A. poling

B. liquation

C. distillation

D. electrolytic refining

Answer:

Watch Video Solution

169. The impurities are oxidised in this method.

A. 1. cupellation

B. 2. poling

C. 3. liquation

D. 4. electrolytic refining

Answer:

Watch Video Solution

170. Rusting of iron is

A. formation of iron oxide

B. formation of silver sulphide

C. formation of iron sulphide

D. formation of iron chloride

Answer:

Watch Video Solution

171. Smelting is ally carried out in

A. Reverberatory

B. Blast

C. Open hearth

D. Retort

Answer:

Watch Video Solution

172. The substance added to remove the impurity is

A. Gangue

B. Flux

C. Fuel

D. None of these

Answer:

Watch Video Solution

173. The formula for Iron silicate slag is___

A. FeO

B. CaO

C. $FeSiO_3$

D. None of these

Answer:

Watch Video Solution

174. The furnaces in which there is no direct contact between the hearth and fire box are

A. Blast

B. Retort

C. Reverberatory

D. None of these

Answer:

Watch Video Solution

175. Most abundant ore of iron is

A. Bauxite

B. Carnallite

C. Haematite

D. Pyrolusite

Answer:

Watch Video Solution

176. If the gangue is basic, the flux used is___

A. 1.CaO

B. 2.MgO

C. 3. SiO_2

D. 4. CuO

Answer:

Watch Video Solution

177. The gas released in calcination is

A. O_2

B. NO_2

C. SO_2

D. CO_2

Answer:

Watch Video Solution

178. The method suitable for concentration of the sulphide ores is

A. calcination

B. distillation

C. roasting

D. electrolysis

Answer:

Watch Video Solution

179. Arranging metals in the decreasing order of their reactivity is called___

A. activity series

B. metallic series

C. homologous series

D. periodicity

Answer:

Watch Video Solution

180. The method suitable for purification of low boiling metals is

A. calcination

B. distillation

C. roasting

D. electrolysis

Answer:

Watch Video Solution

181. The corrosion of iron object is favoured by

A. air

B. moisture

C. A & B

D. vacuum

Answer:

Watch Video Solution

182. A process in which the ore is strongly heated in the absence of air or oxygen is

A. buring

B. roasting

C. purification

D. calcination

Answer:

Watch Video Solution

183. The process of extraction of metals from their ore is called.

A. Metallurgy

B. Extraction

C. Metalification

D. Saponification

Answer:

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184. The element or compounds of the metals which occur in nature in the earth's crust are called:

A. metal ores

B. ores

C. minerals

D. metalloids

Answer:

Watch Video Solution

185. Alumium is profitable to extract from

A. hematite

B. lime stone

C. cinnabar

D. bauxite

Answer:

Watch Video Solution

186. What are chalcogens? Why are they so called?

A. ore producing

B. coal producing

C. chalk producing

D. charcoal producing

Answer:

Watch Video Solution

187. The metal never found in free state is

A. Alloy

B. Low reactive

C. High reactive

D. Oxidative

Answer:

Watch Video Solution

188.

The E^{θ} values are

$Zn^{+2} / Zn = -0.76\ V$

$Fe^{+2} / Fe = -0.44\ V$

$Ni^{+2} / Ni = -0.25V$

$Cu^{+2} / Cu = +0.34V$

$Ag^{+} / Ag = +0.80\ V$

$Mn^{+2} / Mn = -1.21V$

$Pt^{+2} / Pt = +1.20V$

The element that does not displace hydrogen from dilute acids is

A. Cu

B. Fe

C. Zn

D. None

Answer:

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189. To extract the metal, the metallic oxide with

A. oxidized

B. burned

C. electrolysed

D. reduced

Answer:

Watch Video Solution

190. High reactivity metals are extracted by ___ of their fused compounds.

A. calcination

B. electrolysis

C. roasting

D. distillation

Answer:

Watch Video Solution

191. Thermite process involve the reaction of metal oxides with

A. aluminium

B. copper

C. oxygen

D. heat

Answer:

Watch Video Solution

192. Suitable impurities are added to the ore to decrease its

A. boiling point

B. freezing point

C. melting point

D. evaporation

Answer:

Watch Video Solution

193. The displacement reactions involving high reactive metals are highly____

A. endothermic

B. exothermic

C. oxidative

D. reducive

Answer:

Watch Video Solution

194. The process of obtaining the pure metal from the impure metal is called_____the metal.

A. extraction

B. calcination

C. refining

D. purification

Answer:

Watch Video Solution

195. The method adopted to purify low melting metals by heating and making them flow on slopy surface is called.

A. Liquation

B. Floatation

C. Distillation

D. Roasting

Answer:

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196. _____ is the method the required metal gets deposited at the cathode.

A. 1. Liquation

B. 2. Electrolysis

C. 3. Calcination

D. 4. Magnetic separation

Answer:

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197. Tarnishing of silver is due to formatio of

A. silver oxide

B. silver hydride

C. silver sulphide

D. silver nitrite

Answer:

Watch Video Solution

198. Development of green coating on copper is due to

A. copper oxide

B. copper sulphate

C. cupric oxide

D. copper carbonate

Answer:

Watch Video Solution

199. The electrolyte used in refinery of copper is ____

A. copper sulphate

B. copper chloride

C. copper carbonate

D. aqueous solution of copper

Answer:

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200. Auto reduction possible with_____ores.

A. carbide

B. oxide

C. sulphide

D. chloride

Answer:

Watch Video Solution

201. ___is used to carry out pyrochemical process.

A. Furnace

B. Electrolite

C. Magnetic wheels

D. Winnowing machines

Answer:

Watch Video Solution

202. The place where the ore is kept in the furnace for heating purpose is

A. Chimney

B. Firebox

C. Hearth

D. Slag

Answer:

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203. _____furnace has both furnace and hearth separated.

A. Blast

B. Reverberatory

C. Open hearth

D. None

Answer:

Watch Video Solution

204. _____furnace contains a big chamber for both fuel and ore.

A. Blast

B. Reverberatory

C. Open hearth

D. Roasting

Answer:

Watch Video Solution

205. If the impurity (gangue) is acidic substance, then the flux used is ____

A. 1. $CuSO_4$

B. 2. HCl

C. 3. CaO

D. 4. $KMnO_4$

Answer:

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206. _____means simply getting rid of unwanted rocky material from ore.

A. Dressing

B. Smelting

C. Purification

D. Separation

Answer:

Watch Video Solution

207. The metals which do not burn oxidise even on surface are

A. silver

B. gold

C. platinum

D. all

Answer:

Watch Video Solution

208. During corrosion __ process takes place.

A. 1. reduction

B. 2. oxidation

C. 3. thermite

D. 4. refining

Answer:

Watch Video Solution

209. Bistler copper is purified by

A. distillation

B. liquation

C. poling

D. electrolytic refining

Answer:

Watch Video Solution

210. The substance added to remove the impurity is

A. flux

B. metals

C. metalloids

D. oxidants

Answer:

Watch Video Solution

211. The formula of Haematite

A. 1. Fe_2O_3

B. 2. Fe_3O_2

C. 3. Fe_3O_4

D. 4. $CuFeS_2$

Answer:

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212. Most abundant metal in the earth's crust is

A. Silver

B. Aluminum

C. Zinc

D. Iron

Answer:

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213. Metals occur in the native form because of their

A. low density

B. high density

C. low reactivity

D. high reactivity

Answer:

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214. Correct statement among the following is

A. a mineral cannot be an ore

B. all minerals are ores

C. an ore cannot be a mineral

D. all ores are minerals

Answer:

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215. Calcination is a pyrochemical process in which the ore is heated in the

A. presence of air

B. absence of air

C. presence of flux

D. absence of flux

Answer:

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216. Roasting is carried out in

A. Blast furnace

B. Reverberatory furnace

C. A & B

D. None

Answer:

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217. Most abundant element in the earth's crust by weight is

A. Aluminium

B. Oxygen

C. Silicon

D. Iron

Answer:

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218. The substance added to remove the impurity is

A. Gangue

B. Flux

C. Slag

D. Mineral

Answer:

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219. Which of the following slag is formed between CaO and SiO_2?

A. 1. Calcium carbonate

B. 2. Calcium silicate

C. 3. Iron silicate

D. 4. Iron carbonate

Answer:

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220. Which of the pairs of ores are carbonate ores ?

A. 1. Magnesite and Magnetite

B. 2. Magnesite and Lime stone

C. 3. Magnetite and Haematite

D. 4. Bauxite and Zincite

Answer:

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221. Method of extraction of metal from purified ore depends on

A. 1. availability of metal

B. 2. physical state of the metal

C. 3. reactivity of the metal

D. 4. cost of the metal.

Answer:

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222. More active metals are not obtained from their ores by simple reduction. This is because

A. 1. More active metals are strong reducing agents

B. 2. Temperature required for reduction is high

C. 3. More expensive

D. 4. All the above

Answer:

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223. 'Na' metal is prepared from fused NaCl by

A. 1. Reduction with carbon

B. 2. Reduction with CO

C. 3. Electrolytic reduction

D. 4. All the above

Answer:

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224. Which combination is wrong for the extraction of sodium metal from fused NaCl ?

A. 1. Cathode - steel vessel

B. 2. Anode - graphite

C. 3. Na - formed at cathode

D. 4. Cl_2 liberated at cathode

Answer:

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225. Which of the following step is not involved in the extraction of Ag ?

A. Addition of KCN

B. Oxidation of Ag

C. Oxidation of Zn

D. Reduction of Ag

Answer:

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226. Which of the following impurities are present in a metal after reduction of ore ?

A. Unchanged ore

B. Metals present in the ore

C. Non-metal from the ore

D. All the above

Answer:

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227. The selection of process of purification of a metal depends on:

A. 1. Nature of the metal

B. 2. Nature of the impurity

C. 3. Difference in properties of Metal acid Impurity

D. 4. All the above

Answer:

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228. Liquation is used for purification of metal if:

A. 1.Metal and impurity differ in Densities

B. 2. Metal and impurity differ in Melting points

C. 3. Metal and impurity differ in Boiling points

D. 4. Metal and impurity differ in Solubilities

Answer:

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229. Chemically rust is a

A. Hydrated Ferric oxide

B. Hydrated ferric chloride

C. Unhydrated ferric oxide

D. Unhydrated ferric chloride

Answer:

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230. When an Iron object is painted, the process of corrosion is reduced due to

A. 1. Paint prevents the oxidation of metal

B. 2. Paint prevents the reduction of oxide

C. 3. Paint act of content between metal and air

D. 4. None

Answer:

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231. The furnaces in which there is no direct contact between the hearth and fire box are

A. Blast furnace

B. Reverberatory furnace

C. Retort furnace

D. Open hearth furnace

Answer:

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232. Active metals are not extracted by the electrolysis or aqueous electrolytes. Explain.

A. Metal produced in less quantity

B. H_2O undergoes reduction preferential to metal ion and liberates H_2 gas

C. Aqueous solutions are stable to electrolysis

D. Metals are formed in liquid state

Answer:

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233. Which of the following is wrong?

A. Sulphides are converted into oxides

B. Ore is heated below its Melting point

C. It is carried out in reverberatory furnace

D. Flux is added during heating

Answer:

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234. Which of the following is correct about calcination ?

A. 1. Carbonate ores are converted into oxides

B. 2. Ore is decomposed

C. 3. Moisture is eliminated from the ore

D. 4. All the above

Answer:

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235. Which of the following is true about preparation of Iron by smelting process?

A. 1. Coke is used as fuel

B. 2. Limestone $CaCO_3$ is used as flux

C. 3. Iron is obtained in Molten state

D. 4. All the above

Answer:

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236. Which of the following is true about the electrolytic refining of metals ?

A. 1. Impure metal is Anode

B. 2. Strip of pure metal is cathode

C. 3. Soluble salt of metal is taken as electrolyte

D. 4. All the above

Answer:

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237. Aluminium is more reactive than Iron, but rate of corrosion in Iron is more than Aluminium. This is due to

A. Oxidation potential of Al is higher than Iron

B. Aluminium forms stable oxide layer

C. Reduction potential of Aluminium is more than Iron

D. Oxidation potential of Iron is more than Aluminium

Answer:

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238. Which of the following method is used for purification of metals containing high boiling impurities ?

A. Liquation

B. Poling

C. Distillation

D. Electrolysis

Answer:

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239. The electrolyte used in refinery of copper is ___

A. Molten $CuSO_4$

B. Acidified $CuSO_4$

C. $CuCl_2$

D. $Cu(NO_3)_2$

Answer:

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240. The main use of $CaCl_2$ in laboratory is

A. To oxide the compound

B. To remove the moisture

C. To polish the metals

D. Impart of the colour

Answer:

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241. Assertion (A) : Gold is available in nature in free state. Reason (R) : High reactive metals are available in free state.

A. 'A' and 'R' are true and 'R' satisfies 'A'

B. 'A' and 'R' are true but 'R' doesnot satisfy 'A

C. 'A' is true but 'R' is false

D. 'A' and 'R' are false

Answer:

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242. Metals are available in: i) free state ii) mixed state.

A. (i) Is true

B. (ii) is true

C. (i) and (ii) are true

D. (i) and (ii) are false

Answer:

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243. Assertion (A) : Bauxite is ore for Aluminium metal. Reason (R) : The minerals from which the metals are extracted without economical loss are called ores.

A. 'A' and 'R' are true and 'R' satisfies 'A'

B. 'A' and 'R' are true but 'R' doesnot satisfy 'A'

C. 'A' is true but 'R' is false

D. 'A' and 'R' are false

Answer:

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244. Assertion (A) : Oxygen - sulpher group in the periodic table is called as chalcogen family. Reason (R) : Ores of many metals are oxides and sulphides.

A. 'A' and 'R' are true and 'R' satisfies 'A'

B. 'A' and 'R' are true but 'R' doesnot satisfy 'A'

C. 'A' is true but 'R' is false

D. 'A' and 'R' are false

Answer:

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245. The correct steps of process of metallurgy is i) purification of the metal ii) concentration of the ore iii) extraction of crude metal iv) selection of ore from minerals.

A. $ii \rightarrow iv \rightarrow i \rightarrow iii$

B. $iv \rightarrow ii \rightarrow iii \rightarrow i$

C. $i \rightarrow ii \rightarrow iv \rightarrow iii$

D. $ii \rightarrow iii \rightarrow iv \rightarrow i$

Answer:

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246. P: Extraction of the metal from Its ores depends on the physical property of the ore. Q: Concentration of the ore depends on the reactivity of the metal.

A. i) is true

B. ii) is true

C. i) and ii) are true

D. i) and ii) are false

Answer:

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247. Which of the following reduction is suitable for extraction of crude metal from the ores like K, Na, Mg, etc ?

A. 1.Reduction by heating with C or CO

B. 2. Reduction by electrolysis of their aqueous solutions

C. 3. Reduction by electrolysis of the fused ore

D. 4. None of the above

Answer:

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248. P: Corrosion of iron is an oxidation process.

Q : Corrosion occurs in presence of water and air.

A. 1. P is true

B. 2. Q is true

C. 3. P and Q are true

D. 4. P and Q are false

Answer:

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249. Assertion (A) : Alloy metal does not undergo corrosion, Reason (R) : Alloying process prevent the surface of the surface of the metallic object to come contact with atmosphere.

A. 'A' and 'R' are true and 'R' satisfies 'A'

B. 'A' and ‘R’ are true but 'R’ doesnot satisfy 'A'

C. 'A' is true but R' is false

D. 'A' and 'R' are false

Answer:

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250. Assertion (A) : Zn can be obtained by distillation method. Reason (R) : Zn is a low boiling metal.

A. 'A' and 'R' are true and 'R' satisfies 'A'

B. 'A' and 'R' are true but 'R' doesnot satisfy 'A’

C. 'A' is true but 'R' is false

D. 'A' and "R' are false

Answer:

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251. The product in the reduction of PbO with carbon is

A. PbO_2

B. Pb

C. PbC

D. PbO_3

Answer:

Watch Video Solution

252. What will happen if the displacement reaction takes place in between $TiCl_4$ and Mg ?

A. A. Heat energy releases

B. B. Heat energy absorbs

C. C. Neither 'A' nor 'B'

D. $D.\ Cl_2$ gas releases

Answer:

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253. What will happen if cinnabar heats ?

A. MgO will form

B. AgO will form

C. HgO will form

D. AuO will form

Answer:

Watch Video Solution

254. What will happen if a stainless steel rod placed in moisture air ?

A. It forms rust

B. It doesn't form rust

C. It melts

D. It reducts

Answer:

Watch Video Solution

255. There is metal oxide on a tool. The tool is made with

A. wood

B. gold

C. iron

D. steel

Answer:

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256. Two test tubes. 'A' and 'B' contains iron nails. In 'A' test tube iron nail is half dipped with water and in 'B' test tube iron nail is completely dipped in water and some oil also added. Then

A. Both nails in A and B undergo rusting

B. Nail in Both A and B do not undergo rusting

C. Nail in 'A' rusts but not in 'B'

D. Nail in 'B' rusts but not in 'A'

Answer:

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257. Extract Na from NaCl, we obtain Na at

A. cathode

B. anode

C. A & B

D. none

Answer:

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258. i) Bauxite ($Al_2O_3 \cdot 2H_2O$) ii) Copper iron pyrites ($CuFeS_2$) iii) Gypsum ($CaSO_4 \cdot 2H_2O$) Which of the given ores contains two metals ?

A. (i)

B. (ii)

C. (i) and (iii)

D. (i) and (ii)

Answer:

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259. Which of the following is not a mineral for iron metal ?

A. i) Copper iron pyrites

B. ii) Haematite

C. iii) Magnetite.

D. (iv). carnallite

Answer:

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260. Which of the following undergoes an auto (self) reduction ?

i) PbO

ii) Fe_2O_3

iii) Cu_2S

iv) $TiCl_4$

A. 1. i and ii

B. 2. ii and iv

C. 3. iii only

D. 4. i only

Answer:

Watch Video Solution

261. The process in which the ore is mixed with flux and fuel and strongly heated is

A. Reverberatory furnace

B. Blast furnace

C. Retort furnace

D. Above all

Answer:

Watch Video Solution

262. Which of the following is not used to purification of a metal ?

A. 1. poling

B. 2. distillation

C. 3. alloying

D. 4. liquation

Answer:

Watch Video Solution

263. Which of the following metal is low reactivity metal ?

A. 1. Zn

B. 2. Na

C. 3. Cu

D. 4. Au

Answer:

Watch Video Solution

264. Which of the following method is used for purification of Zinc ?

A. 1. poling

B. 2. Electrolytic refining

C. 3. Liquation

D. 4. Distillation

Answer:

Watch Video Solution

265. Name few highly reactive metals, which are never found in nature in free state.

A. Au

B. Mg

C. K

D. Al

Answer:

Watch Video Solution

266. Which of the following is the correct formula of gypsum?

A. $CaSO_4 \cdot ½H_2O$

B. $CuSO_4 \cdot ½H_2O$

C. $CaSO_4 \cdot 2H_2O$

D. $CuSO_4 \cdot 2H_2O$

Answer:

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267. Which of the following is not sulphide ore ?

A. 1. Galena

B. 2. Cinnabar

C. 3. Zinc blend

D. 4. Magnesite

Answer:

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268. In which of the following method a stream of water is used ?

A. 1. Froth floatation

B. 2. Hydraulic washing

C. 3. Magnetic separation

D. 4. Hand picking

Answer:

Watch Video Solution

269. Which of the following is a chemical method ?

A. 1. Froth floatation

B. 2. Magnetic separation

C. 3. Levigation

D. 4. Leaching

Answer:

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270. Which of the following is wrong about poling ?

A. 1. Green wood poles are used

B. 2. Impurities are removed as gases or scum

C. 3. Blister copper is purified in this method

D. 4. Reducing gases evolved enhance the oxidation of copper

Answer:

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271. Which of the following is the correct order of activities series ?

A. 1. $K > Mg > Zn > Al$

B. 2. $Na > Mg > Zn > Fe$

C. 3. $Mg > Ag > Cu > Pb$

D. 4.. $Cu > Ag > Au > Al$

Answer:

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272. Which of the following metal is not available in native state ?

A. 1. K

B. 2. Al

C. 3. Mg

D. 4. All the above

Answer:

Watch Video Solution

273. Which method is most suitable to enrich the sulphide ores ?

A. 1.Washing

B. 2. Froth floatation

C. 3. Magnetic separation

D. 4. Hand picking

Answer:

Watch Video Solution

274. Which of the following is slag formed in the smelting of iron ?

A. 1. $FeSiO_3$

B. 2. $CaCO_3$

C. 3. $CaSiO_3$

D. 4. Fe_2O_3

Answer:

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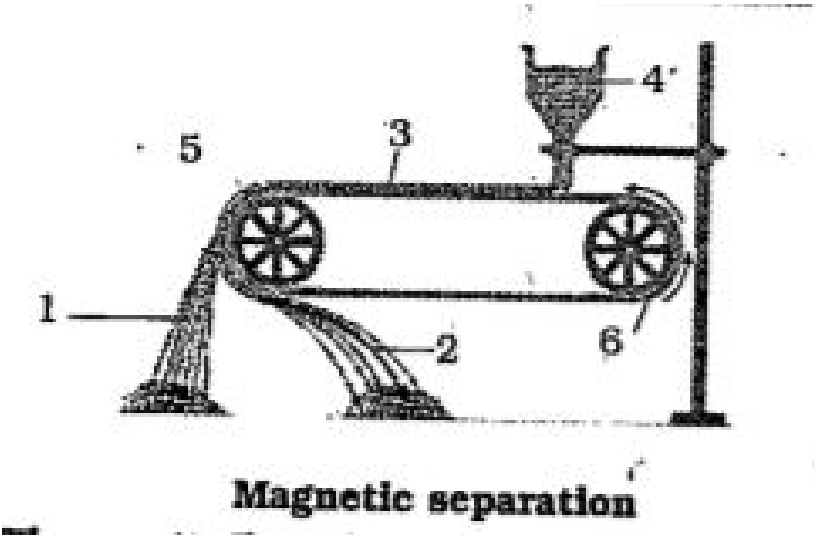
275. The parts 5 and 2 are



Magnetic separation

A. Iron wheel and magnetic substance

B. Magnetic wheel and magnetic substance

C. Iron wheel and non-magnetic substance

D. Magnetic wheel and non-magnetic substance

Answer:

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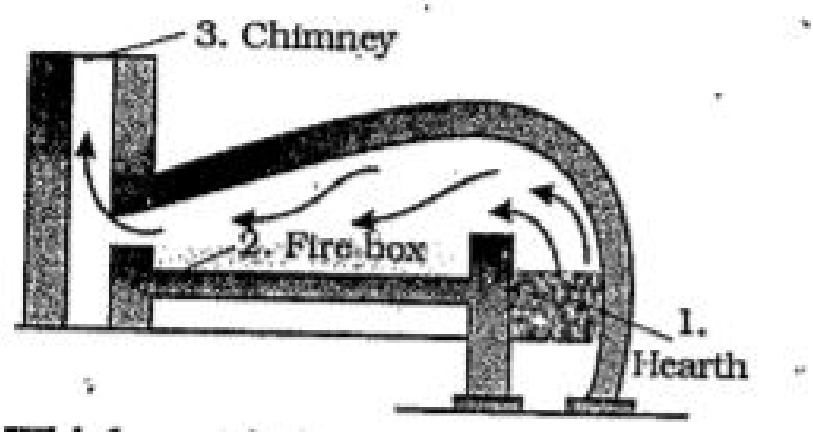
276. Which part is labelled wrong ?



A. 1

B. 2

C. 3

D. 2 and 1

Answer:

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277. Which reaction is appreciable for its role to join railings of railway tracks ?

A. electrolysis

B. thermite

C. decomposition

D. neutralization

Answer:

Watch Video Solution

278. Alloys are appreciable because

A. They do not rust

B. They do not undergo wear and tear

C. They can oxidise

D. A and B

Answer:

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279. For the electrolysis of NaCl, a large quantity of electricity is required to keep the ore in molten state. We can save electricity by

A. Adding water to the ore

B. adding impurities to the ore

C. adding pine oil to the ore

D. mixing with a log

Answer:

Watch Video Solution

280. Assertion (A) : The reaction $2Al + Fe_2O_3 \rightarrow Al_2O_3 + 2Fe + heatis \rightarrow jo \in rail \in gsofrailwaytrack$

. Assertion (R) : Molten iron will be produced in a thermite process.

A. A and R are true and R supports A

B. A and R are true but R doesn't support A

C. A is true but R is false

D. A is false but R is true

Answer:

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281. Which of the following is not suitable for a saw to present rusting ?

A. Painting

B. alloying

C. greasing

D. None

Answer:

Watch Video Solution

282. To separate husk from cooking rice __ method is suitable.

A. Hand picking

B. Froth floatation

C. Magnetic separation

D. Washing

Answer:

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283. Which of the following is suitable to water supply in our home?

A. PVC pipes

B. Steel pipes

C. Iron pipes

D. A (or) B

Answer:

Watch Video Solution

284. Which of the following cannot prevent the formation of rusting ?

A. 1. Galvanizing

B. 2. Alloying

C. 3. Painting

D. 4. None

Answer:

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285. _____reaction is used in joining railings of railway tracks.

A. Pyro chemical

B. Smelting

C. Calcination

D. Thermite

Answer:

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