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# CHEMISTRY

# BOOKS - BEYOND PUBLICATION

# PRINCIPLES OF METALLURGY

## Example

**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?


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

**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 as oxide ores.

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**7.** List three metals that are found in nature in uncombined form.

 Watch Video Solution

**8.** Write a note on dressing of ore in metallurgy.

Watch Video Solution

**9.** Write a note on dressing of ore in metallurgy.

Watch Video Solution

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

 Watch Video Solution

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

 Watch Video Solution

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

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**13.** Write the names of any two ores of iron?

Watch Video Solution

**14.** The formula of Haematite

Watch Video Solution

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

 Watch Video Solution

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

 Watch Video Solution

**17.** Write short note on froth floatation process.

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**18.** Explain the process of fertilization in plants.

 Watch Video Solution

**19.** The method suitable for concentration of the sulphide ores is

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

Watch Video Solution

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

Watch Video Solution

**22.** Write short note on Calcination .

Watch Video Solution

**23.** Write short note on Calcination .

Watch Video Solution

**24.** Write short note on Roasting .

Watch Video Solution

**25.** What do you understand by the following terms (i) roasting (ii) smelting

Watch Video Solution

**26.** To which of the following ores, calcination process in not applicable

Watch Video Solution

**27.** What do you understand by the following terms (i) roasting (ii) smelting

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**30.** What is Gangue?

Watch Video Solution

**31.** Explain the following terms :

amplitude

Watch Video Solution

**32.** Draw the diagram showing: Froth floatation

Watch Video Solution

**33.** Draw the diagram showing: Magnetic separation.

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**38.** Mention two methods which produce very pure metals from impure metals.

Watch Video Solution

**39.** Mention two methods which produce very pure metals from impure metals.

Watch Video Solution

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

Watch Video Solution

**41.** What is activity series? How it helps in extraction of metals?

Watch Video Solution

**42.** What is activity series? How it helps in extraction of metals?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**48.** Show that both air and water are necessary for corrosion of iron.

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**54.** Do you know how metals are obtained ?

Watch Video Solution

**55.** How the metals are present in nature?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**60.** How are metals extracted from mineral ores?

Watch Video Solution

**61.** Which of the following methods cannot be used to prepare propane?

Watch Video Solution

**62.** Do you know why corrosion occurs?

Watch Video Solution

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

Watch Video Solution

**64.** What is the role of furnace in metallurgy?

Watch Video Solution

**65.** How do furnaces bear large amounts of heat?

Watch Video Solution

**66.** Do all furnaces have same structure?

Watch Video Solution

**67.** How do you classify ores based on their formula?

Watch Video Solution

**68.** 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.

Watch Video Solution

**69.** What metals can we get form the ores ?

Watch Video Solution

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

Watch Video Solution

**71.** Show that both air and water are necessary for corrosion of iron.

Watch Video Solution

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

Watch Video Solution

**73.** Arrange Ag, Mg, K in acitivity series.

Watch Video Solution

**74.** Metals occur in nature as free elements or compounds are called.

Watch Video Solution

**75.** Name the phenomenon where in a metal such as iron is damages when exposed to moist air for a long time.

Watch Video Solution

**76.** Name the method by which pure metal can be obtained.

Watch Video Solution

**77.** Give the name of element which is in free state.

Watch Video Solution

**78.** The impurities like clay are called as.

Watch Video Solution

**79.** Name one situation where thermite reaction has seen.

Watch Video Solution

**80.** Represent the chemical forula of iron rust.

Watch Video Solution

**81.** Give the formula of Bauxite.

Watch Video Solution

**82.** Name the pyrochemical process in which ore is heated in the absence of air.

Watch Video Solution

**83.** Name some metals that we use in our daily life.

Watch Video Solution

**84.** What is bronze ?

Watch Video Solution

**85.** What is an alloy ? Give example.

Watch Video Solution

**86.** How do we find metals in the nature ?

Watch Video Solution

**87.** What are minerals?

Watch Video Solution

**88.** What are ores?

Watch Video Solution

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

Watch Video Solution

**90.** Name few moderately reactive metals.

Watch Video Solution

**91.** Name few metals which occur in native state in nature. Why do they occur so?

Watch Video Solution

**92.** What is dressing of an ore?

Watch Video Solution

**93.** What is activity series?

Watch Video Solution

**94.** How do you extract highly reactive metals?

Watch Video Solution

**95.** How do you extract moderately reactive metals?

Watch Video Solution

**96.** What is roasting? Give an example.

Watch Video Solution

**97.** What is calcination? Give example.

Watch Video Solution

**98.** Mention some properties of metals.

Watch Video Solution

**99.** Define Metallurgy

Watch Video Solution

**100.** What is the major source of metals?

Watch Video Solution

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

Watch Video Solution

**102.** Mention the stages involved in extraction of a metal from its ore.

Watch Video Solution

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

Watch Video Solution

**104.** Give an example for reduction of metal oxide with carbon.

Watch Video Solution

**105.** Give an example for reduction of oxide ore with CO.

Watch Video Solution

**106.** Refining is

Watch Video Solution

**107.** Mention some important methods of refining.

Watch Video Solution

**108.** What is flux ? Give an example.

Watch Video Solution

**109.** What is the role of furnace in metallurgy?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**113.** Aluminium occurs in combined state in nature whereas gold is found in free state. Why?

Watch Video Solution

**114.** Why is carbon not used for reducing aluminium from aluminium oxide?

Watch Video Solution

**115.** An ore gives $CO_2$ on treatment with dilite acid. Identify the ore and name the process that should be used to concentrate this ore.

Watch Video Solution

**116.** Name two metals other than aluminum which are obtained by electrolytic reduction.

Watch Video Solution

**117.** Name two metals which corrode easily and two metals which do not corrode readily.

Watch Video Solution

**118.** What is Gangue?

Watch Video Solution

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

Watch Video Solution

**120.** What are amphoteric oxides? Give two examples of amphoteric oxides.

Watch Video Solution

**121.** What is anode mud?

Watch Video Solution

**122.** What is Amalgam ?

Watch Video Solution

**123.** How do alloys like brass and bronze differ in composition ?

Watch Video Solution

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

Watch Video Solution

**125.** In the extraction of which of the following metals is used for amalgamation?

Watch Video Solution

**126.** Is alloy homogeneous or hetergeneous ?

Watch Video Solution

**127.** The gas liberated when zinc reacts with dilute HCI is

Watch Video Solution

**128.** Stainless steel does not rust because

Watch Video Solution

**129.** Does distilled water rusts the iron nail ?

Watch Video Solution

**130.** $X + YSO_4 \rightarrow XSO_4 + Y$

$Y + XSO_4 \rightarrow Noreaction$ Out of the two elements X and Y which is more reactive and why ?

Watch Video Solution

**131.** Does the metal present at the anode get directly deposited on the cathode in the electrolytic refining of metals ?

Watch Video Solution

**132.** Metals when react with nitric acid does not release hydrogen gas. Why ?

Watch Video Solution

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

Watch Video Solution

**134.** Give reasons for the following.

Platinum, gold and silver are used to make jewellery.

Watch Video Solution

**135.** Alloys are used for electrical heating devices rather than pure metals. Give reasons.

Watch Video Solution

**136.** _____reaction is used in joining railings of railway tracks.

Watch Video Solution

**137.** Give an example of auto reduction of sulphise ores.

Watch Video Solution

**138.** Explain the process of hand picking.

Watch Video Solution

**139.** What is the role of washing in enriching the ore?

Watch Video Solution

**140.** Write the reactions inside the blast furnace.

Watch Video Solution

**141.** Do all furnaces have same structure?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

**146.** Give some examples for corrosion.

Watch Video Solution

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

Watch Video Solution

**148.** Write about electrolysis of NaCl.

Watch Video Solution

**149.** Do all metals react with water?

Watch Video Solution

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

Watch Video Solution

**151.** What is a furance ? Explain various parts of furnace.

Watch Video Solution

**152.** Why alloyong is preferred for metals? Explain with examples.

Watch Video Solution

**153.** Silicon is metalloid. How do you support this?

Watch Video Solution

**154.** Mention the most important metals and non-metals from the following products.a) Annapurna salt.

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

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

$FeCl_2 + Zn \rightarrow$

$ZnCl_2 + Fe \rightarrow$

Watch Video Solution

**161.** Which metals are more reactive and which are less reactive ? How can you say ?

Watch Video Solution

**162.** Discuss about the nature of K, Ca and Al ?

Watch Video Solution

**163.** During dressing process, which things are get away from the ore ? Write one method of dressing process ?

Watch Video Solution

**164.** What is the role of washing in enriching the ore?

Watch Video Solution

**165.** X is a substance, which was given red colour ,ivith methyl orange solution and $H_2$ gas ,ivlth Zn pieces. What would be X ?

Watch Video Solution

**166.** 'X' is a metal which do not react with water or strong acid. But with chlorine it

forms XCl. What it would be ? From this what can you conclude ?

Watch Video Solution

**167.** Which ores of metals are needed roasting during extracting process ? Why ?

Watch Video Solution

**168.** Give an example of auto reduction of sulphise ores.

Watch Video Solution

**169.** When do highly reactive metals are used as reducing agents. What is the result of it ?

Watch Video Solution

**170.** Why do we refine the metal ? How many refining methods are there ? What are they ?

Watch Video Solution

**171.** What is rusting of iron?

Watch Video Solution

**172.** What is the nature of pure iron ? When do it become hard ?

Watch Video Solution

**173.** Metals which can be extracted by smelting process is/are

Watch Video Solution

**174.** An acidic flux among the following is

Watch Video Solution

**175.** Name two types of furnaces ? For which purpose they will be useful ?

Watch Video Solution

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

 Watch Video Solution

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

 Watch Video Solution

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

Watch Video Solution

**179.** Explain purification or refining of crude metal.

Watch Video Solution

**180.** Explain the process involved in corrosion.

Watch Video Solution

**181.** Draw the diagram of blast furnace and label it parts.

Watch Video Solution

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

Watch Video Solution

**183.** What is meant by electrolytic refining? Give example.

Watch Video Solution

**184.** Explain purification or refining of crude metal.

Watch Video Solution

**185.** Explain the following:

Distillation.

Watch Video Solution

**186.** Wrote the short notes on: poling

Watch Video Solution

**187.** Write the short notes on:liquation

Watch Video Solution

**188.** Wrote the short notes on:electrolysis

Watch Video Solution

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

Watch Video Solution

**190.** What is concentration or dressing?

Watch Video Solution

**191.** Explain the process of sorting wool.

Watch Video Solution

**192.** When a green solid P was heated it turned into a black solid Q and a colourless gas X was released. On passing gas X, over heated

carbon and another colourless gas Y was formed. Gas Y burned in oxygen to reform gas X.

Name gases X and Y.

Watch Video Solution

**193.** When a green solid P was heated it turned into a black solid Q and a colourless gas X was released. On passing gas X, over heated carbon and another colourless gas Y was formed. Gas Y burned in oxygen to reform gas

X.

What will be be observed if gas X is bubbled into lime water ?

Watch Video Solution

**194.** When a green solid P was heated it turned into a black solid Q and a colourless gas X was released. On passing gas X, over heated carbon and another colourless gas Y was formed. Gas Y burned in oxygen to reform gas

X.

Identify P and Q.

Watch Video Solution

**195.** When a green solid P was heated it turned into a black solid Q and a colourless gas X was released. On passing gas X, over heated carbon and another colourless gas Y was formed. Gas Y burned in oxygen to reform gas X.

Name gases X and Y.

Watch Video Solution

**196.** Corrosion is a serious problem. Every year an enormous amount of money is spend to replace damaged iron. What step can be taken to prevent this damage ? What will learners infer from this passage ?

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Exercise

**1.** The impurity present in the ore is called as:

A. Gangue

B. Flux

C. Slag

D. Mineral\

**Answer:**

Watch Video Solution

**2.** Which of the following is carbonate ore?

A. Magnesite

B. Bauxite

C. Gypsum

D. Galena

**Answer:**

Watch Video Solution

**3.** Which of the following is the correct formula of gypsum?

A. $CuSO_4.2H_2O$

B. $CaSO_4.\frac{1}{2}H_2O$

C. $CuSO_{4.5}H_2O$

D. $CaSO_{4.2}H_2O$

**Answer:**

Watch Video Solution

**4.** The oil used in froth flotation process is

A. Kerosene oil

B. Pine oil

C. Coconut oil

D. Olive oil

**Answer:**

Watch Video Solution

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

A. Sulphide

B. Oxide

C. Carbonate

D. Nitrate

**Answer:**

 Watch Video Solution

**6.** Galen is an ore of?

A. Zn

B. Pb

C. Hg

D. Al

**Answer:**

Watch Video Solution

**7.** The metal that occurs in the native form is?

A. Pb

B. Au

C. Fe

D. Hg

**Answer:**


**8.** Most abundant metal in the earth's crust is

A. Silver

B. Aluminium

C. Zinc

D. Iron

**Answer:**

Watch Video Solution

**9.** The reducing agent in thermite process is?

A. Al

B. Mg

C. Fe

D. Si

**Answer:**

Watch Video Solution

**10.** The purpose of smelting an ore is

A. Oxidise

B. Reduce

C. Neutralise

D. None of these

**Answer:**

Watch Video Solution

**11.** The oil used in froth flotation process is

Watch Video Solution

**12.** Why do we purify the crude metal although it is dressed ?

Watch Video Solution

**13.** Which type of process the smelting is ?

Watch Video Solution

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

Watch Video Solution

**15.** Write a note on dressing of ore in metallurgy.

Watch Video Solution

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

Watch Video Solution

**17.** Write the names of any two ores of iron?

Watch Video Solution

**18.** Which one of the following reacts with Aluminium is used to join railway tracks or cracked machine parts ?

A. Iron oxide

B. Iron (III) oxide

C. Iron (III) oxide

D. Iron (IV) oxide

**Answer:**

Watch Video Solution

**19.** Pyrolousite is an ore of

A. Zn

B. Al

C. Mn

D. Mg

**Answer:**

Watch Video Solution

**20.** Which of the following is the outlet through which fuel gases go out the furnace ?

A. Chimney

B. Smelting

C. Corrosion

D. Alloying

**Answer:**

Watch Video Solution

**21.** Which of the following metals are moderately reactive ?

A. Pb

B. Fe

C. Zn

D. All of these

**Answer:**

Watch Video Solution

**22.** Which of the following is the formula of calcium silicate ?

A. $CaSiO_3$

B. CaSiO

C. $CaSiO_2$

D. CaSi

**Answer:**

Watch Video Solution

**23.** Which of the following process occurs in the presence of oxygen or air below its melting point ?

A. Roasting

B. Smelting

C. Calcination

D. A and C

**Answer:**

Watch Video Solution

**24.** Generally which furnace is used for roasting ?

A. Frunace

B. Blast furnace

C. Reverberatory furnace

D. All of these

**Answer:**

 Watch Video Solution

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

A. Liquation

B. Refining

C. Poling

D. Distillation

**Answer:**

Watch Video Solution

**26.** Carnallite is an ore of

A. Cu

B. Al

C. Mg

D. Zn

**Answer:**

 Watch Video Solution

**27.** Which of the following process occurs in the absence of air ?

A. Calcination

B. Roasting

C. Smelting

D. A and C

**Answer:**

 Watch Video Solution

**28.** Which of the following one, we need to make gold hard ?

A. Aluminium, Silver

B. Silver, Zinc

C. Zinc, Copper

D. Silver, Copper

**Answer:**

 Watch Video Solution

**29.** Which of the following is an example of corrosion ?

A. Development of green coating on copper

B. Rusting of iron

C. Tarnishing of silver

D. All of these

**Answer:**

Watch Video Solution

**30.** Which of the following is most common metal in the Earth's crust ?

A. Zn

B. Cu

C. Al

D. Mg

**Answer:**

Watch Video Solution

**31.** Which of the following are the ores of magnesium (Mg) ?

A. Carnallite

B. Magnesite

C. Epsom salt

D. All of these

**Answer:**

 Watch Video Solution

**32.** The reducing agent in thermite process is?

A. Al

B. Fe

C. Si

D. Mg

**Answer:**

Watch Video Solution

**33.** Magnetic is an ore of

A. Hg

B. Ag

C. Mg

D. Fe

**Answer:**

 Watch Video Solution

**34.** Which of the following is added to the ore to remove the gangue from it ?

A. Flux

B. Chimney

C. Fire box

D. Hearth

**Answer:**

Watch Video Solution

**35.** Which of the following means, simply getting rid of as much of the unwanted rocky material as possible from the ore ?

A. Froth floatation

B. Extraction

C. Concentration

D. Refining

**Answer:**

Watch Video Solution

**36.** Which of the following is the place inside the furnace where the ore is kept for heating purpose ?

A. Chimney

B. Hearth

C. Flux

D. Fire box

**Answer:**

Watch Video Solution

**37.** The smelting is carried our in a specially built furnace known as

A. Blast furnace

B. Furnace

C. Reverberatory

D. None of these

**Answer:**

Watch Video Solution

**38.** The electrolyte is an acidified solution of

A. Calcium sulphate

B. Sodium sulphate

C. Magnesium sulphate

D. Copper sulphate

**Answer:**

Watch Video Solution

**39.** Which of the following is the part of the furnace where the fuel is kept for burning ?

A. Fire box

B. Chimney

C. Flux

D. Hearth

**Answer:**

Watch Video Solution

**40.** Which of the following is defined as the arrangement of the metals in decreasing order of their reactivity ?

A. Decreasing series

B. Reactivity series

C. Acivity series

D. Arrangement series

**Answer:**

Watch Video Solution

**41.** Which of the following metals are high reactivity ?

A. Na

B. Ca

C. K

D. All of these

**Answer:**

Watch Video Solution

**42.** The process of extraction and isolation of the metal from its naturally occurring compounds is called

A. Metallurgy

B. Minerals

C. Mining

D. Matrix

**Answer:**

Watch Video Solution

**43.** The composition of Haematite is

A. $Fe_3O_4$

B. $FeCO_3$

C. $Fe_2O_3$

D. Fe

**Answer:**

Watch Video Solution

**44.** One of the ores of Aluminium i

A. Magnetite

B. Bauxite

C. Zincite

D. Haematite

**Answer:**

Watch Video Solution

**45.** .....method is in use for removing gangue form sulphide ores.

A. Froth Floatation

B. Magnetic separation

C. Leaching

D. None of these

**Answer:**

Watch Video Solution

**46.** The composition of copper pyrites is

A. $Cu_2S$

B. $Cu_2O$

C. $CuFeS_2$

D. None of these

**Answer:**

Watch Video Solution

**47.** The ore from which Mercury is obtained

A. Galena

B. Cinnabar

C. Gypsum

D. Camallite

**Answer:**

Watch Video Solution

**48.** In the word chalcogen, 'chalco' means

A. Produce

B. Ore

C. Slag

D. Mineral

**Answer:**

Watch Video Solution

**49.** Least active metal among the following.

A. K

B. Na

C. Mg

D. Au

**Answer:**

Watch Video Solution

**50.** If the ore particles and the impurities are different in one of the properties of colour, size than the process of separation is called

A. Washing

B. Leaching

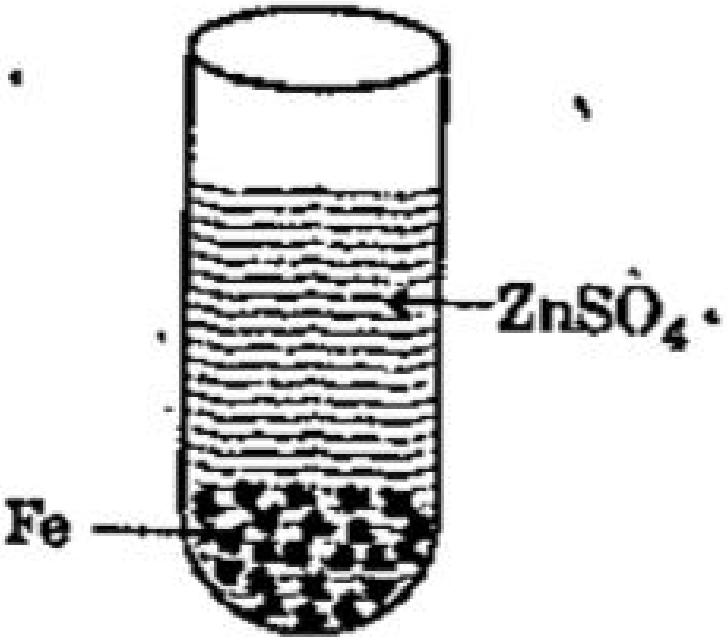
C. Floatation

D. Hand picking

**Answer:**

 Watch Video Solution

**51.** 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:**

Watch Video Solution

**52.** Which of the following metals can replace copper from a solution of copper sulphate

A. Silver

B. Gold

C. Zinc

D. Platinum

**Answer:**

Watch Video Solution

**53.** Which one of the following elements occur in free state

A. Phosphorus

B. Sulphur

C. Silicon

D. Gold

**Answer:**

Watch Video Solution

**54.** The reactivity of metals Al, Ag and Cu increase in the order of

A. Al gt Cu gt Ag

B. Ag gt Cu gt Al

C. Ag gt Al gt Cu

D. Cu gt Ag gt Al

**Answer:**

Watch Video Solution

**55.** The second most abundant metal in the earth's crust is

A. aluminium

B. oxygen

C. iron

D. silicon

**Answer:**

Watch Video Solution

**56.** The process of coating Zn over Fe is known is

A. Cathodic protection

B. Galvanization

C. Metallurgy

D. Tinning

**Answer:**

 Watch Video Solution

**57.** Identify an ore containing sulphur in it.

A. Calamine

B. Siderite

C. Iron pyrites

D. Fluorsper

**Answer:**

Watch Video Solution

**58.** Which of the following is an amphoteric oxide ?

A. $Al_2O_3$

B. CaO

C. MgO

D. $Na_2O$

**Answer:**

Watch Video Solution

**59.** Which is not a sulphide ore of metal ?

A. Argentite

B. Zinc blende

C. Galena

D. Dolomite

**Answer:**

Watch Video Solution

**60.** Which of the following alloys does not contain copper

A. Bronze

B. Bell metal

C. Solder

D. Brass

**Answer:**

 Watch Video Solution

**61.** Which of the following is the least abundant metal in earth's crust ?

A. Al

B. K

C. Fe

D. Ca

**Answer:**

Watch Video Solution

**62.** A mineral is called ore if.....

A. the metal can be extracted from it

B. the metal is costly

C. a metal can be profitably extracted from it

D. a metal cannot be extracted from it.

**Answer:**

Watch Video Solution

**63.** Concentration by forth floatation is applicable for which of the following ores ?

A. $Al_2O_3$

B. $Te_2O_{3.3}H_2O$

C. $Te_3O_4$

D. ZnS

**Answer:**

Watch Video Solution

**64.** Specific gravity of slag is always :

A. more or less then metal depending on the metal

B. less than the molten metal

C. same as molten metal

D. greater than the molten metal

**Answer:**

Watch Video Solution

**65.** Polling process is employed for the removal of

A. Zn from ZnS

B. $FeomFe_2O_3$

C. $CuomCu_2O$

D. $AlomAl_2O-3$

**Answer:**

Watch Video Solution

**66.** Highly electropositive metals can not he extracted by carbon reduction process because these

A. metals do not react with carbon

B. metal oxides are not reduced by carbon

C. metals from carbides

D. metals are not reduced by carbon

**Answer:**

Watch Video Solution

**67.** Tamishing of silver is due to the presence of this gas in air.....

A. $H_2S$

B. $CO_2$

C. water vapour

D. CO

**Answer:**

Watch Video Solution

**68.** Pyrochemical processes in metallurgy are carried out in structure called.....

A. hearths

B. magnetic rollers

C. chimneys

D. furnaces

**Answer:**

Watch Video Solution

**69.** The following metal is obtained by the auto reduction of its sulphide ore.....

A. Mg

B. Fe

C. Cu

D. Pb

**Answer:**

Watch Video Solution

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

A. Iron

B. Sodium

C. Aluminium

D. Gold

**Answer:**

 Watch Video Solution

**71.** Rusting of iron takes place in

A. ordinary water

B. both ordinary and distilled water

C. distilled water

D. none of the above

**Answer:**

Watch Video Solution

**72.** The principle behind froth floatation is :

A. preferential wetting of ore and gangue particles

B. difference in specific gravity of ore and gangue particles

C. electrical properties of ore particles

D. magnetic properties of ore and gangue

**Answer:**

Watch Video Solution

**73.** In Goldschmit alumino thermic process, thermite mixture is :

A. $1 part Fe_2O_3$ and $1 part Al$

B. $3 parts Fe_2O_3$ and $2 part Al$

C. $3 parts Fe_2O_3$ and $1 part Al$

D. $3 parts Al_2O_3$ and $4 parts Al$

**Answer:**

Watch Video Solution

**74.** In the metallurgical extraction of iron, which of the following process takes place in reverberatory furnace ?

A. Conversion of cast iron to wrought iron

B. Coversion of pig iron to cast iron

C. Conversion of iron oxide to iron

D. Conversion of cast iron to steel

**Answer:**

**75.** During the electrolysis of molten salts, the metals are always produced at.....

A. cathode

B. anode

C. either at cathode or at anode

D. bottom of the vessel

**Answer:**

 Watch Video Solution

**76.** Arrange the following metals in the order of their decreasing reactivity, Fe, Cu, Mg, Ca, Zn, Ag

A. Ca gt Mg gt Zn gt Fe gt Cu gt Ag

B. Ca gt Zn gt Cu gt Mg gt Ag gt Fe

C. Ca gt Mg gt Fe gt Zn gt Cu gt Ag

D. Ca gt Zn gt Mg gt Cu gt Ag gt Fe

**Answer:**

Watch Video Solution

**77.** The corrent decreasing order of the reactivity of the metals : Fe, Co, Pb, Cu is

A. Fe, Cu, Pb, Co

B. Fe, Co, Cu, Pb

C. Fe, Co, Pb, Cu

D. Fe, Pb, Co, Cu

**Answer:**

 Watch Video Solution

**78.** Roosting is carried out to

A. remove C and S impurities

B. melt the ore

C. convert sulphide ore to oxide

D. remove water of hydration

**Answer:**

Watch Video Solution

**79.** Which is correct in the following ?

A. Gangue + Slag $\rightarrow$ Flux

B. Flux + Slag $\rightarrow$ Gangue

C. Gangue + Impurities $\rightarrow$ Flux

D. Gangue + Flux $\rightarrow$ Slag

**Answer:**

Watch Video Solution

**80.** Which is not feasible ?

A. $CuSO_4 + Zn \rightarrow ZnSO_4 + Cu$

B. $ZnSO_4 + Cu \rightarrow CuSO_4 + Zn$

C. $CuSO_4 + Fe \rightarrow FeSO_4 + Cu$

D. `2 AgNO_3 + Cu rarr Cu (NO_3)_2 + 2 Ag.

**Answer:**

Watch Video Solution

**81.** Food cans are coated with tin and not with zinc because

A. zinc is less reactive than tin

B. zinc is costlier than in

C. zinc has higher melting point than tin

D.

**Answer:**

Watch Video Solution

**82.** Copper do not displace_____from dilute acids

A. $H_2$

B. $O_2$

C. $SO_4$

D. $H^+$

**Answer:**

Watch Video Solution

**83.** Aluminium foli is used fro wrapping food because :

A. It is malleable

B. It is a good conductor of heat

C. It is sonorous

D. It is ductile

**Answer:**

Watch Video Solution

**84.** Steel is an alloy of

A. Fe and Zn

B. Fe and C

C. Cr and Fe

D. Zn and Cr

**Answer:**

 Watch Video Solution

**85.** Which of the following types of ores cn be converted in oxide by calcination ?

A. Halide ores

B. Carbonate ores

C. Fluoride ores

D. Sulphite

**Answer:**

Watch Video Solution

**86.** Which of the following methods is suitable for preventing an iron frying pan from rusting?

A. Applying grease

B. Applying paint

C. Coating of zinc

D. All the above

**Answer:**

Watch Video Solution

**87.** Point out correct statement Iron is :

A. more reactive than aluminium

B. less reactive than aluminium

C. more reactive than copper

D. more reactive than zinc

**Answer:**

Watch Video Solution

**88.** Which of the following process involve the smelting process ?

A. $ZnCO_3 \rightarrow ZnO + CO_2$

B. $PbS + 3O_2 \rightarrow 2PbO + 2SO_2$

C. $Al_2O_2.2H_2O \rightarrow Al_2O_3 + 2H_2O$

D. $Fe_2O_3 + 3C \rightarrow 2Fe + 3CO$

**Answer:**

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**89.** During melting of haematite in a blast furnace.....is the flux added.

A. sand

B. magnesia

C. lime stone

D. lime

**Answer:**

Watch Video Solution

**90.** Low-melting metal like tin can be purified by this method

A. Liquation

B. Poling

C. Electrolytic refining

D. Distillation

**Answer:**

Watch Video Solution

**91.** Low boiling metals like mercury and zinc are refined by

A. Distillation

B. Liquation

C. Poling

D. Electrolytic reduction

**Answer:**

Watch Video Solution

**92.** Which of the following are Sulphides ?

Zinc Blende

Rock Salt

Cinnabar

Gypsum

A. b

B. a,c

C. d

D. b,c

**Answer:**


**93.** Which of the following are not ionic compounds ?

KCl

HCl

$\mathbb{C}l_4$

NaCl

A. a,c

B. b,c

C. c,d

D. a,b

**Answer:**

Watch Video Solution

**94.** Aluminium is used for making cooking utensils. Which of the following properties of aluminium are responsible for utilizing it ?

Good thermal conductivity

Good electrical conductivity

Ductility

High melting point

A. a,c

B. b,c

C. a,b

D. a,d

**Answer:**

Watch Video Solution

**95.** Which of the following methods is suitable for preventing an iron article from rusting ?

Applying grease

Applying paint

Coating Zinc

keep the article in water

A. a,b

B. b,c

C. a,c

D. a,b,c

**Answer:**

Watch Video Solution

**96.** The formula of carnalllite is

A. $KCl.\ MgCl_{2.6}H_2O$

B. $MgCO_3$

C. $MgSO_{4.7}H_2O$

D. $CaCO_3 . MgCO_3$

**Answer:**

Watch Video Solution

**97.** --------- group are called chalcogenes.

A. 13th

B. 14th

C. 15th

D. 16th

**Answer:**

Watch Video Solution

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

A. Cathode - steel vessel

B. Anode - graphite

C. Na- formed at cathode

D. $Cl_2$ liberated at cathode

**Answer:**

Watch Video Solution

**99.** Blister copper is a

A. Pure form of copper

B. Impure form of copper

C. Alloy of copper and zinc

D. Ore of copper

**Answer:**

Watch Video Solution

**100.** Which of the following is wrong about poling ?

A. Green wood poles are used

B. Impurities are removed as gases or scum

C. Blister copper is purified in this method

D. Reducing gases evolved enhance the oxidation of copper

**Answer:**

Watch Video Solution

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

A. Paint prevents the oxidation of metal

B. Paint prevents the reduction of oxide

C. Paint act of content between metal and air

D. None

**Answer:**

Watch Video Solution

**102.** More electropositive metals (more active metals ) are not prepared by electrolysis of Aqueous solutions of compounds of metals. This is because

A. Metal produced in less quanitity

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:**

Watch Video Solution

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

A. Coke is used as fuel

B. Lime stone $CaCO_3$ is used as flux

C. Iron is obtained in molten state

D. All the above

**Answer:**

Watch Video Solution

**104.** 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' ruts but not in 'A'

**Answer:**

Watch Video Solution

**105.** Buried underground pipes are coupled with small magnesium foils. This is because

A. Magnesium keeps the iron in proper position

B. Magnesium protects the iron from corrosion by sacrifical method

C. It protects the iron from dissolving

D. All the above

**Answer:**

Watch Video Solution

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

A. Hydrogen

B. Chlorine

C. Oxygen

D. Nitrogen

**Answer:**

Watch Video Solution

**107.** ___is used to convert sulphide ore into oxide ore.

A. Roasting

B. Calcination

C. Smelting

D. None of these

**Answer:**

Watch Video Solution

**108.** The ore of mercury is ____

A. Galena

B. Bauxite

C. Haematite

D. Cinnabar

**Answer:**

Watch Video Solution

**109.** Low boiling metals are purified by----- method

A. poling

B. liquation

C. distillation

D. electrolytic refining

**Answer:**

Watch Video Solution

**110.** Rusting of iron is due to.....

A. formation of iron oxide

B. formation of silver sulphide

C. formation of iron sulphide

D. formation of iron chloride

**Answer:**

Watch Video Solution

**111.** The substance added to remove the impurity is

A. Gangue

B. Flux

C. Fuel

D. None of these

**Answer:**

Watch Video Solution

**112.** The formula for slag is.....

A. FeO

B. CaO

C. $FeSiO_3$

D. None of these

**Answer:**

Watch Video Solution

**113.** 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

**114.** Which process are used for dressing of the ore ?

Watch Video Solution

**115.** What is the importance of froth in this method ?

Watch Video Solution

**116.** The oil used in froth flotation process is

Watch Video Solution

**117.** What are the impurities present in the cast iron ?

Watch Video Solution

**118.** Is there any other name for purification of impure metal ?

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**119.** On which factors the purification of a metal depends ?

Watch Video Solution

**120.** How many methods are there to purify a metal ?

Watch Video Solution

**121.** When do distillation process is useful ?

Watch Video Solution

**122.** In electrolytic refining, where do the impure metal is kept ?

Watch Video Solution

**123.** Which things are added to the ore in smelting ?

Watch Video Solution

**124.** What is the effect of heat that produced in smelting process ?

Watch Video Solution

**125.** How do the impurities change during smelting ?

Watch Video Solution

**126.** How do the ore get heated in smelting process ?

Watch Video Solution

**127.** What is role of flux in removing impurities ?

Watch Video Solution

**128.** Write two sentences about the reactivity of 'Pb'.

Watch Video Solution

**129.** There is metal which has low boiling point. To refine it which process do you suggest ? Explain.

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**130.** Pure iron is available to you. If you want to make buckets and cooking utensils with it, which metals do the iron mixed with ? Why ?

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**131.** Sowmya says 'molten products are obtained in blast furnace'. But Radha says 'molten products are obtained in reverbaratory furnace. Who is correct ? Why ?

Watch Video Solution

**132.** The displacement reactions involving high reactive metals are highly____

A. endothermic

B. exothermic

C. oxidative

D. reductive

**Answer:**

Watch Video Solution

**133.** _____ is the method the required metal gets deposited at the cathode.

A. Liquation

B. Electrolysis

C. Calcination

D. Magnetic separation

**Answer:**

Watch Video Solution

**134.** .....chemical process involves heat.

A. Thermo

B. Exothermic

C. Endothermic

D. Pyro

**Answer:**

Watch Video Solution

**135.** _____furnace has both furnace and hearth separated.

A. Blast

B. Reverbertory

C. Open hearth

D. None

**Answer:**

Watch Video Solution

**136.** If the impurity (gangue) is acidic substance, then the flux used is _____

A. $CuSO_4$

B. HCl

C. Cao

D. $KmnO_4$

**Answer:**

Watch Video Solution

**137.** Correct statement among the following :

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:**

Watch Video Solution

**138.** Extract Na from NaCl, we obtain Na at

A. cathode

B. anode

C. A and B

D. none

**Answer:**

Watch Video Solution

**139.** Which of the following slag is formed between $CaO$ and $SiO_2$?

A. Calcium carbonate

B. Calcium silicate

C. Iron Silicate

D. Iron carbonate

**Answer:**

Watch Video Solution

**140.** Which of the following matching is wrong ?

A. Horn silver - AgCl

B. Cinnabar - HgS

C. Galena - ZnS

D. Rock salt - NaCl

**Answer:**

Watch Video Solution

**141.** 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:**

Watch Video Solution

**142.** Chemically rust is a

A. Hydrated Ferric oxide

B. Hydrated ferric chloride

C. Unhydraetd ferric oxide

D. Unhydrated ferric chloride

**Answer:**

Watch Video Solution

**143.** More the H+ ion concentration increases the rate of rusting due to

A. $H^+$ ions increases reduction of Fe

B. $H^+$ ions increase reduction of $O_2$

C. $H^+$ ions transfer electron from cathode to anode

D. All the above

**Answer:**

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**144.** Which of the following is the correct order of activities series ?

A. K gt Mg gt Zn gt Al

B. Na gt Mg gt Zn gt Fe

C. Mg gt Ag gt Cu gt Pb

D. Cu gt Ag gt Au gt Al

**Answer:**


**145.** 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:**

Watch Video Solution

**146.** In the froth floatation process ore particles are come along with the froth due to

A. Welting of mineral particles with water

B. Welting of mineral particles with oil

C. Welting of gangue particles with oil

D. Lightness of mineral particles

**Answer:**

Watch Video Solution

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

A. K

B. Al

C. Mg

D. All the above

**Answer:**

Watch Video Solution

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

A. Washing

B. Froth floatation

C. Magnetic separation

D. Hand picking

**Answer:**

Watch Video Solution

**149.** Which of the following reagent is used in the extraction of Aluminium form bauxite ?

A. sodium hydorxide

B. sodium carbonate

C. sodium hydroen carbonate

D. sodium chloride

**Answer:**

Watch Video Solution

**150.** Why do gold and silver found in free state in nature ?

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**151.** Which metals found iin combined state in nature ? Why ?

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**152.** What happens when crushed particles are washed ?

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**153.** How do the metals like zinc, iron are extracted from their ores ?

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