



CHEMISTRY

BOOKS - ARIHANT PUBLICATION

JHARKHAND

METALS, NON - METALS AND METALLURGY

Exam Booster For Cracking Exam

1. Bauxite is an oxide mineral of

A. barlum

B. boron

C. bismuth

D. aluminium

Answer: D



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2. Which of the following statements about anhydrous aluminium chloride is correct?

A. It exists as $AlCl_3$, molecules

B. It is not easily hydrolysed

C. It sublimes at $100^{\circ}C$ under vacuum

D. It is a strong Lewis base

Answer: C



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3. Aluminium powder is used.

A. in thermite welding

B. in making paints

C. In extraction of metals

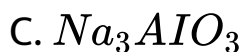
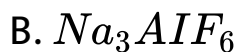
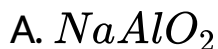
D. All of these

Answer: D



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4. The composition of cryolite is



Answer: B



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5. The process used for purification of bauxite ore containing iron oxide impurity is known as

- A. Hoopes process
- B. Serpeck's process
- C. Baeyer's process
- D. Electrolytic process

Answer: C



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6. The chief ore of aluminium is

A. cryolite

B. feldspar

C. kaolin

D. bauxite

Answer: D



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7. Aluminium appears like gold when it is mixed with

A. 90% Cu

B. 50% Ni

C. 90% Sn

D. 50%CO

Answer: A



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8. Which technique is used in the manufacture of aluminium from bauxite?

A. Reduction with magnesium

- B. Reduction with coke
- C. Electrolytic reduction
- D. Reduction with Iron

Answer: C



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9. In the aluminothermic process, aluminium acts as

- A. oxidising agent
- B. a flux
- C. a reducing agent

D. a solder

Answer: C



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10. Alum is used in the manufacture of cloth as

A. an oxidant

B. a reductant

C. a drying agent

D. a mordant

Answer: D



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11. In which alloy, aluminium is not present?

A. Duralumin

B. Brass

C. Alnico

D. Magnalium

Answer: B



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12. Lapis-Lazuli' is a blue coloured precious stone. It is mineral of the class

- A. Sodium aluminosilicate
- B. Zinc cobaltate
- C. Basic copper carbonate
- D. Prussian blue

Answer: A

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13. Which of the following statements is correct?

- A. Bauxite is an ore of aluminium
- B. Magnetite is an ore of manganese
- C. Haematite is an ore of mercury
- D. Pyrite is an ore of phosphorus

Answer: A



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- 14.** In the electrolysis of alumina, cryolite is added to
- A. lower the melting point of alumina
 - B. increase the electrical conductivity

C. minimise the anode effect

D. remove Impurities from alumina

Answer: A::B



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15. Cryolite is

A. sodium aluminium fluoride

B. sodlum boro fluoride

C. calcium magnesium carbonate

D. magnesium silicate

Answer: A



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16. Duralumin is an alloy of

A. Al and Mg

B. Mg and Cu

C. Al, Mg, Mn and Cu

D. Al and Cu

Answer: C



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17. Cryolite is used in the electrolytic extraction of aluminium

A. to obtain more aluminium

B. to dissolve bauxite

C. to protect anode

D. as a reducing agent

Answer: B



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18. Which is not a mineral of aluminium

A. Anhydrite

B. Bauxite

C. Cryolite

D. Diaspor

Answer: A



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19. From pure alumina, aluminium is obtained by

A. reduction of Al_2O_3 with carbon

B. electrolysis of fused alumina containing cryolite and feldspar

C. (a) and (b)

D. None of the above 2

Answer: B



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20. In Serpeck's process for the purification of bauxite, an important by-product is

A. $CaCl_2$

B. Al_2O_3

C. NH_3

D. Al

Answer: C



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21. The oxide ore is

A. zinc blend

B. malachite

C. feldspar

D. bauxite

Answer: D



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22. Aluminium metal is not acted upon by pure water as

A. it is not a reactive metal

B. It is a light metal

C. it is protected by a film of aluminium oxide

D. Impurities in water are essential for the reaction to occur

Answer: C



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23. Alum is a

A. complex salt

B. normal salt

C. mixed salt

D. double salt

Answer: D



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24. Aluminium metal is refined by

A. Serpeck's process

B. Baeyer's process

C. Hall's process

D. Hooppe's process

Answer: D



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25. Which of the following mineral does not contain Al?

A. Mica

B. Fluorspar

C. Feldspar

D. Cryolite

Answer: B



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26. Bauxite containing chief impurities of oxides of silicon is called

- A. red bauxite
- B. white bauxite
- C. black bauxite
- D. no specific name

Answer: B



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27. In the purification of bauxite by Hall's process

- A. Bauxite ore is heated with NaOH solution at $150^{\circ}C$
- B. Bauxite ore is fused with Na_2CO_3
- C. Bauxite ore is mixed with coke and heated at $1800^{\circ}C$ in the current of hydrogen
- D. Bauxite ore is heated with $NaHC_3$

Answer: B



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28. Pure alumina is

A. a good conductor of electricity

B. a bad conductor of electricity

C. volatile in nature

D. an electrovalent compound

Answer: B



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29. In the electrolysis of alumina it is mixed with cryolite (Na_3AlF_6) and Fluorspar (CaF_2) in the ratio 20:40:20. The function of cryolite and fluorspar is

A. to dissolve alumina

B. to increase ionisation of alumina

C. to increase the fusion temperature of alumina

D. to decrease the fusion temperature of alumina

and to make it good conductor of electricity

Answer: D



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30. Sapphire is a mineral of

A. Ba

B. B

C. BI

D. AI

Answer: D



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31. When Al is added to KOH solution

A. no action takes place

B. oxygen is evolved

C. water is produced

D. hydrogen is evolved

Answer: D



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32. Anhydrous $AlCl_3$ is prepared by

- A. dissolving aluminium metal in conc. HCl
- B. by heating a mixture of alumina with chlorine
- C. by heating a mixture of alumina and carbon with dry chlorine
- D. by heating alumina with dry HCl

Answer: C



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33. Which of the following is an alloy?

A. Arsenic

B. Tin

C. Brass

D. Antimony

Answer: C



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34. The cathode used in the electrolytic cell of aluminium extraction is made of

- A. aluminium
- B. carbon lining
- C. iron
- D. steel

Answer: B



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35. Which of the following statement about aluminium is not correct?

A. It liberates hydrogen from acids as well as alkalies

B. It liberates hydrogen from acids but not from alkalies

C. It liberates hydrogen from hot alkali solution

D. It liberates hydrogen from boiling water

Answer: B



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36. Aluminium salt commonly used to stop bleeding is

A. aluminium sulphate

B. potash alum

C. aluminium chloride

D. aluminium fluoride

Answer: B



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37. The chief impurity present in red bauxite is

A. SiO_2

B. Fe_2O_3

C. K_2SO_4

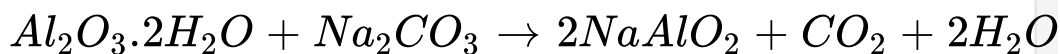
D. NaF

Answer: B



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38. Name the method used for the purification of red bauxite where the following reaction is involved



A. Baeyer's method

B. Hall's method

C. Serpeck's method

D. Hoopes's method

Answer: B



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39. Eka-aluminium is

A. gallium

B. germanium

C. indium

D. scandium

Answer: B



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40. Aluminium deposited as vapours on glass forms a good mirror because.

A. It has better reflecting power than Ag

B. it does not scratch

C. coating is much smoother

D. It does not tarnish in air

Answer: D



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