



CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

PERIODIC CLASSIFICATION OF ELEMENTS

Test Yourself

1. Predict the nature of the bond in the following molecules.

(i) NaCl

(b) NaBr

(c) NaI

(iv) NaF

(v) NaH



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1. The number of periods and groups in the periodic table are

A. 6,16

B. 7,17

C. 8,18

D. 7,18

Answer: D



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2. The number of periods and groups in the periodic table are

A. atomic number

B. atomic mass

C. isotopic mass

D. number of neutrons

Answer: A



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3. group contains the member of halogen family.

A. 17th

B. 15th

C. 18th

D. 16th

Answer: A



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4. is a relative periodic property.

- A. atomic radii
- B. ionic radii
- C. electron affinity
- D. electronegativity

Answer: B

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5. Chemical formula of rust is

- A. $FeO \cdot xH_2O$
- B. $FeO_4 \cdot xH_2O$
- C. $Fe_2O_3 \cdot xH_2O$
- D. FeO

Answer: C

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6. In the aluminothermic process the role of Al is

- A. oxidizing agent
- B. reducing agent
- C. hydrogenating agent
- D. sulphurising agent

Answer: B



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7. The process of coating the surface of metal with a thin layer of zinc is called

- A. painting
- B. thinning
- C. galvanization

D. electroplating

Answer: C



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8. Which of the following have inert gases 2 electrons in the outermost shell ?

A. He

B. Ne

C. Ar

D. Kr

Answer: A



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9. Neon shows zero electron affinity due to

- A. stable arrangement of neutrons
- B. stable configuration of electrons
- C. reduced size
- D. increased density

Answer: B



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10. Is an important metal to form amalgam.

- A. Ag
- B. Hg
- C. Mg
- D. Al

Answer: B

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Textbook Evaluation Solved Fill In The Blanks

1. If the electronegativity difference between two bonded atoms in a molecule is greater than 1.7, the nature of bonding is

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2. Is the longest period in the periodical table.

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3. Forms the basis of modern periodic table.

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4. If the distance between two Cl atoms in Cl_2 molecule is 1.98 \AA , then the radius of Cl atom is

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5. Among the given species A^- , A^+ , and A, the smallest one is size is

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6. The scientist who propounded the modern periodic law is

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7. Across the period, ionic radii (increases,decreases)

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8. And..... Are called inner transition elements.

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9. The chief ore of Aluminium is

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10. The chemical name of rust is

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Textbook Evaluation Solved Match The Following

- | | |
|----------------------|-----------------------------------|
| 1. Galvanisation | (a) Noble gas elements |
| 2. Calcination | (b) Coating with Zn |
| 1. 3. Redox reaction | (c) Silver-tin amalgam |
| 4. Dental filling | (d) Alumino thermic process |
| 5. Group 18 elements | (e) Heating in the absence of air |



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Textbook Evaluation Solved True Or False If False Give The Correct Statement N

1. Moseley's periodic table is based on atomic mass.



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2. Ionic radius increases across the period from left to right.



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3. All ores are minerals, but all minerals cannot be called as ores.



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4. Al wires are used as electric cables due to their silvery white colour.



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5. An alloy is a heterogenous mixture of metals.



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Textbook Evaluation Solved Assertion And Reason

1. Assertion : The nature of bond in HF molecule is ionic

Reason : The electronegativity difference between H and F is 1.9

- A. A and R are correct, R explains the A.
- B. A is correct, R is wrong
- C. A is wrong, R is correct
- D. A and R are correct, R doesn't explain A.

Answer: i



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2. Assertion : Magnesium is used to protect steel from rusting

Reason : Magnesium is more reactive than iron

- A. A and R are correct, R explains the A.
- B. A is correct, R is wrong
- C. A is wrong, R is correct
- D. A and R are correct, R doesn't explain A.

Answer: i

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3. Assertion : An uncleaned copper vessel is covered with greenish layer.

Reason : Copper is not attacked by alkali

- A. A and R are correct, R explains the A.
- B. A is correct, R is wrong

C. A is wrong, R is correct

D. A and R are correct, R doesn't explain A.

Answer: iv

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Textbook Evaluation Solved Short Answer Questions

1. A is a reddish brown metal, which combines with O_2 at $< 1370\text{ K}$ gives B, a black coloured compound. At a temperature $> 1370\text{ K}$ A gives C which is red in colour. Find A, B and C with reaction.

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2. A is a silvery white metal. A combines with O_2 to form B at 800°C , the alloy of A is used in making the aircraft. Find A and B.

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3. Which is rust ? Give the equation for formation of rust.

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4. State two conditions necessary for rusting of iron.

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Textbook Evaluation Solved Long Answer Questions

1. (a) State the reason for addition of caustic alkali to bauxite ore during purification of bauxite.

(b) Along with cryolite and alumina, another substance is added to the electrolyte mixture. Name the substance and give one reason for the addition.

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2. The electronic configuration of metal A is 2,8,18,1.

The metal A when exposed to air and moisture forms B a green layered compound. A with conc. H_2SO_4 forms C and D along with water. D is a gaseous compound. Find A, B, C and D.

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3. Explain smelting process.

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Textbook Evaluation Solved Hot Questions

1. Metal A belongs to period 3 and group 13. A in red hot condition reacts with steam to form B. A with strong alkali forms C. Find A, B and C with reactions.

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2. Name the acid that renders aluminium passive. Why ?

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3. (a) Identify the bond between H and F in HF molecule.

(b) What property forms the basis of identification?

(c) How does the property vary in periods and in groups?

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Additional Question Solved Choose The Best Answer

1. which period contains only two elements ?

A. Second

B. First

C. Third

D. Fifth

Answer: B



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2. Group number of carbon family is

A. 13

B. 15

C. 17

D. 14

Answer: D



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3. Lanthanides and actinides are called as

- A. Alkali metal
- B. Inner transition elements
- C. Transition elements
- D. Representative elements

Answer: B



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4. Valency of all the alkali metals is

- A. 1
- B. 2
- C.
- D. 3

Answer: A



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5. The distance between the two hydrogen nuclei of the molecule is 0.74

A. So its covalent radius is

A. 0.74 Å

B. 0.99 Å

C. 0.37 Å

D. 7.4 Å

Answer: C



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6. Along the group , atomic radius

- A. decreases
- B. increases
- C. decrease then increases
- D. no change

Answer: B

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7. Pick out the correct ionic radii in increasing order for the following species Na^- , Cl , Na^+ , Cl^-

- A. $\text{Na}^- < \text{Cl} < \text{Na}^+ < \text{Cl}^-$
- B. $\text{Cl} < \text{Na} < \text{Na}^+ < \text{Cl}^-$
- C. $\text{Cl}^- < \text{Na}^- < \text{Na}^+ < \text{Cl}$
- D. $\text{Cl} < \text{Na}^+ < \text{Cl}^- < \text{Na}$

Answer: D

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8. Electron affinity is measured in

A. KJ^{-}

B. $mol|^{-}$

C. KJ/mol

D. KJ/mol^2

Answer: C

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9. Noble gases has Electron affinity .

A. Positive

B. negative

C. Zero

D. high

Answer: C



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10. Which is widely used scale to determine the electronegativity ?

A. Pauling scale

B. Moseley scale

C. Mendeleev scale

D. none of these

Answer: A



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11. The mineral from which a metal can be readily and economically extracted on a large scale is said to be a/an

- A. Ore
- B. Flux
- C. Slag
- D. gangue

Answer: A



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12. Flux + Gangue \rightarrow ?

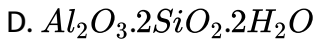
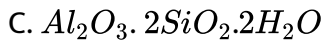
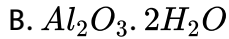
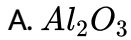
- A. Mineral
- B. Matrix
- C. Slag
- D. Smog

Answer: C



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13. Chemical formula of clay is



Answer: C



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14. The ore which can be purified by gravity separation method is

.....

- A. Haematite
- B. oxide ores
- C. Sulphide ores
- D. both (a) and (b)

Answer: D

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15. Oil used in Froth floatation method is

- A. Pine oil
- B. natural oil
- C. Crude oil
- D. Synthetic oil

Answer: A

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16. Zinc blende is purified by

- A. Hydraulic method
- B. Magnetic Separation method
- C. Froth floatation method
- D.

Answer: C



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17. Bauxite ore is purified by

- A. Leaching process
- B. Hydraulic method
- C. Froth floatation method

D. Magnetic separation method

Answer: A



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18. More reactive metal is

A. Zn

B. Fe

C. Ag

D. Na

Answer: D



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19. Which metal process low melting point ?

- A. Gallium
- B. Cesium
- C. Aluminium
- D. Copper

Answer: A

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20. Which one of the following is not an ore of aluminium ?

- A. Bauxite
- B. Haematite
- C. Cryolite
- D. Corundum

Answer: B

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21. Conversion of bauxite into alumina is

- A. Hall's process
- B. Alumina thermic process
- C. Baeyer's process
- D.

Answer: C



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22. Electrolyte reduction of alumina into aluminium is

- A. Hall's process
- B. Alumina thermic process
- C. Baeyer's process

D.

Answer: A



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23. In the Hall's process , cathode used is

A. Iron tank

B. Graphite

C. Pure alumina

D. Iron tank linked with graphite

Answer: D



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24. Electrolyte used in Hall's process

- A. Pure alumina + molten cryolite + fluorspar
- B. Pure alumina + molten bauxite + fluorspar
- C. Pure bauxite + molten cryolite + fluorspar
- D. Pure bauxite + molten Haematite + fluorspar

Answer: A

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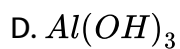
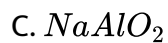
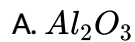
25. A silvery white metal is

- A. Aluminium
- B. Copper
- C. Iron
- D. Zinc

Answer: A

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26. Aluminium reacts with NaOH to give



Answer: C



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27. Metal used in household utensils is

A. Al

B. Co

C. Fe

D. NA

Answer: A



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28. Chief ore of copper is

A. $CuFeS_2$

B. CU_2O

C. CU_2S

D. $CuSO_4$

Answer: A



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29. Molecular formula for copper pyrites

A. Cu_2O

B. Cu_2S

C. $CuCO_3$

D. $CuFeS_2$

Answer: D



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30. Metal used in electroplating is

A. Cu

B. Al

C. Fe

D. Co

Answer: A



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31. The second most abundant metal available next to aluminium is

..... .

A. Cu

B. Ag

C. Au

D. Fe

Answer: D



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32. Most important ore of iron is

A. Haemtite

B. Magnetic

C. Iron pyrite

D. Cryolite

Answer: A



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33. Fe reacts with dilute nitric acid in cold condition to give

A. Ferrous nitride

B. Ferrous nitrate

C. Ferric nitride

D. Ferric nitrate

Answer: B



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34. In the brass alloy, which is solvent ?

A. Zn

B. Co

C. Ag

D. Cu

Answer: D

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35. Which one of the following is used for making pressure cookers?

A. Brass

B. Magnalium

C. Duralumin

D. Nickel steel

Answer: C

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36. Which is used as propeller ?

- A. Stainless steel
- B. Nickel steel
- C. Duralumin
- D. Nickel steel

Answer: B



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37. Gold does not occur in the combined form it does not react with air or water . It is in the State .

- A. Ag
- B. Au
- C. Pt

D. Al

Answer: A



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38. Which of the following metal is not found in a free state ?

A. Ag

B. Au

C. Pt

D. Al

Answer: D



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39. Which one of the following does not react with copper ?

A. Oxygen

B. Conc. H_2SO_4

C. NaOH

D. Conc. HNO_3

Answer: C

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40. An element which is an essential constituent of all organic compounds belongs to group .

A. 14th

B. 15th

C. 16th

D. 17th

Answer: A

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41. The highest ionization energy is exhibited by

- A. Halogens
- B. Alkaline earth metals
- C. Transition metal
- D. Nobel gases

Answer: D

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42. Which two element of the following be longs to the same period ? (Al , Si, Ba, O)

- A. Si, Ba
- B. Al, Ba

C. Al, Si

D. Al, O

Answer: C



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43. 98% pure copper and 2% impurities is called

A. Matte

B. Copper pyrites

C. blister copper

D. Cuprite

Answer: C



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44. is used in making anchors and electromagnets .

- A. Steel
- B. Pig iron
- C. Cast iron
- D. Wrought iron

Answer: D



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45. Which reagent does not react with iron ? J

- A. Conc. HNO_3
- B. Conc. H_2SO_4
- C. Steam
- D. Dil HNO_3

Answer: A



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Additional Question Solved Fill In The Blanks

1. Matte is a mixture of



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2. Second group elements are called

A.

B.

C.

D.

Answer:



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3. The ionisation energy Along the period .



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4. Property , which predicts the nature of bonding between the atoms in a molecule .



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5. If the difference in electronegativity between two elements is 1.7 , the bond hasand..... .



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6. If the difference in electronegativity between two elements is less than 1.7 the bond is considered to be



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7. The process of extraction of ores from the earth's crust is called



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8. Is the main principle behind in Hydraulic method .



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9. Froth floatation process is preferable for Ores



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10. On heating in air , iron forms

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11. Iron reacts with Chlorine to form

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12. The corrosive action in the absence of moisture is called

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13. technique used to renovate Pamban bridge .

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14. Atomic number is number of in the nucleus or number of Revolving around the nucleus is an atom .

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15. The long form of periodic table is based upon the Of elements .

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16. In the periodic table , the horizontal rows are calledand vertical columns are called

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17. The modern periodic table had been divided intoblocks known asblocks.

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18. The Of the elements is a period decreases from left to right and the atomic radii of the element present in a groupdownwards .

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19. Period is the longest peroid and it contains elements.

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20. Metal like Ti, Cr, Mn, Zr, find their application in the manufacture of defence equipment called

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21. The metal plays a vital role in nulcear reactions releasing nuclear energy and used in nuclear weapons .

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22. Copper , silver and gold are called as they are used in makingand

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23. purity of gold is expressed inand Is pure gold .

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24. Is an ore of a aluminium and Is its mineral .

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25. All cannot be called as ores but all are minerals

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26. The process of extraction the ores form the earth from the earth 's crust is called

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27. The rocky impurity associated with the ore is called Or

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28. Is the process of reducing the roasted metallic oxide to metal

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29. Slag is the fusible product formed whenreacts with
During the extraction of metals.

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30. The temperature applied in Hall's process is and the voltage used in

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31. Is used in making manhole covers and drain pipes and is used in making transmission cables and T.V towers .

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32. Is defined as the slow and steady destruction of a metal by the environment

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33. is a process of coating Zinc on iron sheets by using electric current .

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Additional Question Solved Match The Following

- | | |
|-------------------------|--------------|
| i. Boron family | (a) Group 17 |
| ii. Carbon family | (b) Group 16 |
| 1. iii. Nitrogen family | (c) Group 13 |
| iv. Chalcogen family | (d) Group 15 |
| v. Halogen family | (e) Group 14 |

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- | | |
|-------------------------------|-----------------------------|
| i. Alkali metals | (a) Lanthanides & Actinides |
| ii. Alkaline earth metals | (b) Group 3-12 |
| 2. iii. Transition elements | (c) Group 2 |
| iv. Inner transition elements | (d) Group 1 |

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3. i. Group 18 (a) Main group elements
ii. Group 3-12 (b) Noble gases
iii. Group 13-18 (c) Halogens
iv. Group 17 (d) Transition elements

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4. i. Copper (a) Lustrous greyish white metal
ii. Iron (b) Cn 112
iii. Aluminium (c) Reddish brown metal
iv. Copernicium (d) Silvery white metal

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- | Alloys | Composition |
|------------------|--------------------|
| i. Brass | (a) Al, Mg, Mn, Cu |
| 5. ii. Duralumin | (b) Cu, Zn |
| iii. Bronze | (c) Al, Mg |
| iv. Magnalium | (d) Cu, Sn |

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Elements	Electronegative value
i. F	(a) 2.5
6. ii. Cl	(b) 2.8
iii. Br	(c) 3.0
iv. I	(d) 4.0

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7.

(Process, , Ores), (i. Hydraulic process, , (a) ZnS), (ii. Magnetic separation

$Al_2O_3 \cdot 2H_2O$;

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- | | |
|-------------------|-------------------|
| i. Cuprite | (a) Halide ore |
| ii. Marble | (b) Oxide ore |
| 8. iii. Fluorspar | (c) Sulphate |
| iv. Galena | (d) Carbonate ore |

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Alloy	Metals present	Uses
1. Brass	Fe, C, Ni	Statues, Coins
2. Bronze	Al, Mg, Mn, Cu	Aircraft, Pressure cookers
3. Duralumin	Fe, C, Ni, Cr	Cables, Propeller
4. Magnalium	Cu, Sn	Automobile parts, Utensils
5. Stainless steel	Cu, Zn	Scientific instruments, Aircraft
6. Nickel steel	Al, Mg	Medals, decorative items

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Metal	Ore	Chemical formula
1. Copper	Bauxite	$ZnCO_3$
2. Aluminium	Haematite	$CuFeS_2$
3. Iron	Copper pyrite	Fe_2O_3
4. Zinc	Calamine	$Al_2O_3 \cdot 2H_2O$

10.

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Additional Question Solved State Whether True Or False If False Give The Correct Statement

1. First period contains only one element

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2. The valency of all alkali metals is one

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3. Noble gases are more reactive .

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4. The atomic radius decreases from Li to B

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5. As the positive charge increases , the size of the cation also increases .

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6. Copper pyrit ore is concentrated by gravity separation method .

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7. Aluiminium alloyed with gold and silver for making coins and jewels.

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8. The corrosive action in the presence of moisture is called wet corrosion.

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9. The physical and chemical properties of elements are the periodic function of their atomic numbers - modern periodic law

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10. The long form of periodic table consists of horizontal rows called group and vertical column called period

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11. The first period in the periodic table is the shortest period and contain 8 element from Lithium to Neon .

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12. The Sixth period in the periodic table is the longest period and contains 32 elements

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13. Group 1,2 and 13-18 are called normal element (or)main group element (or) represenntive elements.

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14. The atomic Size of the elements in a period increases from left to right .

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15. In a period , the metallic character of the element increases while their non metallic character decreases

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16. The last element authenticated by IUPAC is Cn 112 [Copernicium] .

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17. Silver was the first metal to be used in making utensils and weapons

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18. The strategic metals such as copper , silver and gold are used in the manufacturing of defence equipments



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19. Copper , silver and gold are called coinage metals .



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20. For making ornament 24 carat gold is used which is pure gold



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21. The mineral form which a metal can be readily and economically extracted on a large scale is said to be an ore .



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22. The rocky impurity associated with the ore is called flux .

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23. Slag is the fusible product formed when flux reacts with gangue during the extraction of metals

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24. Metals which have high chemical reactivity are found in free state or in native state .

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25. Aluminium is the metal found most abundantly in the earth 's crust.

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26. Aluminium is a reddish brown metal and it is a bad conductor of heat and electricity

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27. Aluminium reacts with strong caustic alkalis forming aluminates .

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28. Conc. Nitric acid render aluminium active due to the formation of nitride film on its surface .

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29. Aluminium is a powerful reducing agent

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30. Duralumin alloy is light , having high tensile strength and corrosion resistant

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31. Fe and Al_2O_3 is used in the thermite welding

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32. The chief ore of copper is Ruby Copper

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33. Iron is a lustrous greyish white metal and can be magnetised.

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34. The rust has the chemical formula as Fe_3O_4

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Additional Question Solved Assertion And Reason

1. Assertion (A) : Nobel gas are unreactive.

Reaction (R) : They have unstable electronic configuration in their valence shells.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: C

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2. Assertion (A) : The nature of bond in NaI molecule is covalent.

Reason (R) : The electronegativity difference between Na and I is 1.5

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: A



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3. Assertion (A) : Haematite ore was purified by Hydraulic method.

Reason (R) : Haematite is oxide ore.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

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4. Assertion (A) : Corundum is a chief ore of aluminium.

Reaction (R) : Molecular formula of corundum is Al_2O_3

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correc but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: C

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5. The chemical properties of the elements in the same period are not similar.

Reason (R) : As the electronic configuration changes across the period, the chemical properties of the elements are not similar.

A. Both (A) and (R) are correct, (R) explains the (A)

B. (A) is correct, (R) is wrong

C. (A) is wrong, (R) is correct

D. (A) and (R) are correct, (R) doesn't explain (A)

Answer: A



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6. Assertion (A) : Copper, silver and Gold are used in making coins and jewellery. SO they are called coinage metals.

Reason (R) : These metals release enormous amount of nuclear energy.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: C

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7. Assertion (A) : metals like Titanium, chromium, Manganese and Zirconium are called strategic metals.

Reason (R) : They find their applications in the manufacturing of defence equipments.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: A



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8. Assertion (A) : Gold, Silver and Platinum are the metals that are found in free state.

Reason (R) : These metals have low chemical reactivity and are found in free state or in native state.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correc but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: B



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9. Aluminium occurs in the combined state.

Reason (R) : It is a reactive metal and so it occurs in combined state.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correc but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: A



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10. Assertion (A): In aluminothermic process, Iron oxide is reduced to iron by igniting with Aluminium powder.

Reason (R): Aluminium is a powerful reducing agent.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: D

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11. Assertion (A) : When iron is dipped in conc HNO_3 , it becomes chemically inert (or) passive.

(R): Iron becomes passive when treated with nitric acid is due to the formation of a layer of iron oxide Fe_3O_4 on its surface.

A. Both (A) and (R) are correct

B. Both (A) and (R) are not correct

C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer:

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12. Assertion (A): Duralumin is used in making aircraft, tools and pressure cookers.

Reason (R): Duralumin is an alloy that is light, strong, resistant to corrosion.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correc but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: B



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13. Assertion (A) : Nickel steel is used in making cables, aircraft parts and propeller.

Reason (R) : Nickel steel alloy is hard, brittle and polishable.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong
- D. (A) is wrong but (R) is correct

Answer: C



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14. Assertion (A) : Magnesium is used in sacrificial protection method to prevent corrosion.

Reason (R) : Magnesium is more reactive than iron. When it is coated on the articles made of steel, it sacrifices itself to protect steel.

- A. Both (A) and (R) are correct
- B. Both (A) and (R) are not correct
- C. (A) is correct but (R) is wrong

D. (A) is wrong but (R) is correct

Answer: A

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15. Assertion (A): Electroplating method not only protects but also enhances the metallic appearance.

Reason (R) : Electroplating is a method of coating one metal with another by passing current.

- A. (A) is right, (R) is wrong
- B. (A) is right, (R) is not relevant
- C. (A) is right, (R) are relevant
- D. Both (A) and (R) are wrong

Answer: C

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1. State modern periodic law.

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2. Write the flow chart of long form of periodic table.

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3. Write any four characteristics of periods.

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4. Briefly write any four characteristics of group in the periodic table.

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5. What are coinage metals ?



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6. What are minerals ?



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7. What are ores ?



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8. Differentiate ore and mineral .



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9. Define - metallurgy.



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10. Why flux is added during metallurgy .

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11. what is slag ? Give example

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12. Write a note about smelting.

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13. why does gold , silver and platinum occur in free state ?

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14. Explain the action of Aluminum with air .

A.

B.

C.

D.

Answer:



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15. How does Aluminium react with caustic soda > Give equation.



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16. prove that aluminum is a powerful reducing agent .



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17. Explain the electrolyte refining of copper .

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18. What is the action of heat on copper ?

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19. Explain the action of dilute nitric acid with copper .

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20. What happens when copper is treated with conc. HNO_3 and with conc. H_2SO_4 ?

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21. What are the uses of copper ?



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22. Explain the action of air with iron .



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23. is the iron is exposed



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24. Explain the action of steam with iron .



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25. Mention the types of iron on the basis of carbon content .



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26. What are alloys ? How are they prepared ?



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27. What is an amalgam? Give one example with its use .



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28. Explain - sacrificial protection .



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29. Define corrosion .



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30. What are the methods used to prevent corrosion?

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31. Give any two uses of aluminum.

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32. What are modern periodic table?

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33. Define periodicity.

A.

B.

C.

D.

Answer:

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34. What are periodic properties?

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35. Define Atomic radius.

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36. Define Metallic radius

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37. What is covalent radius?

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38. Define Ionisation energy

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39. Define Electron affinity.

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40. What is Electronegativity?

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41. Write the steps involved in metallurgical process.



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42. Write a short note on leaching or chemical process.



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43. How will you convert copper into copper earbonate?



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44. Mention the uses of iron .



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45. Explain the method of making alloys



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46. Why alloys are said to solid solutions?

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47. Write a note on Dry corrosion.

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48. Explain Wet Corrosion.

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49. What is electroplating?

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1. Explain the variation of Ionisation energy along the group and period.

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2. How electronegativity values help to find out the nature of bonding between atoms?

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3. Explain Gravity separation method.

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4. Discuss the magnetic separation methods.

 [View Text Solution](#)

5. Explain Froth floatation process.



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6. How will you extract aluminum from its ore?



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7. Explain the extraction of copper from copper pyrites.



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8. Explain the metallurgy of iron.



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9. Explain the types of alloys .

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Additional Question Solved Hot Questuions

1. Why noble gases have zero electron affinity value?

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2. Explain the mechanism of rusting?

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3. All ores are minerals, but all minerals are not ores . Why?

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4. Cationic radius is smaller than its relative neutral atom. Why?



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5. Anionic radius is higher than the corresponding neutral atom. Give reason.



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6. A reddish brown metal A when exposed to moist air forms a green layer B. When A is heated at different temperature in the presence of O_2 it forms two types of oxide - C (black) and D (red). Identify A, B, C, D and write the balanced equation.



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7. A silvery white metal on treatment with NaOH and HCl liberated H_2 gas to form B and C respectively, the metal A will not react with acid D due to the formation of a passive film on the surface. Hence it is used for

transporating acid D. Identify A, B, C, D and support your answer with balanced equations.

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8. Metal A belong to period 4 and group 8. A in red hot condtion reacts with steam to form B. A reacts with dilute HNO_3 to give C. A again reacts with conc H_2SO_4 to give D . Find A, B , C and D with suitable reaction .

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