



CHEMISTRY

BOOKS - SURA CHEMISTRY (TAMIL ENGLISH)

PERIODIC CLASSIFICATION OF ELEMENTS

Textbook Evaluation Choose The Correct Answer

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 basis of modern periodic law is _____

- A. atomic number
- B. atomic mass
- C. isotopic mass
- D. number of neutrons

Answer: A



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3. _____ group contains the members of halogen family .

A. 17^{th}

B. 15^{th}

C. 18^{th}

D. 16^{th}

Answer: A



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4. _____ is a relative periodic property

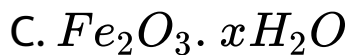
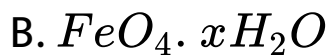
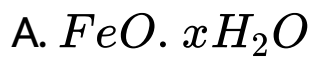
- A. Atomic radii
- B. Ionic radii
- C. Electron affinity
- D. Electronegativity

Answer: D



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5. Chemical formula of rust is _____



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 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 in 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 Match The Following

1. 



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Textbook Evaluation True Or False If False Give The Correct Statement

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. Al alloy is a heterogeneous mixture of metals.



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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 explain the A .

B. A is correct, R is correct

C. A is wrong R is correct .

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

Answer: D



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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 explain the A .

B. A is correct, R is correct

C. A is wrong R is correct .

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

Answer: A



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

Reason : Copper is not attacked by alkali.

A. A and R are correct , R explain the A .

B. A is correct, R is correct

C. A is wrong R is correct .

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

Answer: D



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Textbook Evaluation Short Answer Questions

1. A is a reddish brown metal which combines with O_2 at $< 1370K$ gives B, a black coloured compound. At a temperature $> 1370 K$, 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 $800^\circ C$, the alloy of A is used in making the aircraft. Find A and B



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3. What 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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5. 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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6. 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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7. Explain smelting process .



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Textbook Evaluation Long Answer Questions

1. State the reason addition of caustic alkali to bauxite ore during purification of bauxite .



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Textbook Evaluation Hot Question

1. Metal A belongs or 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. Identify the bond between H and F in HF molecule.





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4. What property forms the basis of identification ?



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5. How does the property vary in periods and in groups ?



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1. Methods of preventing corrosion

A. (i) Alloying : The metals can be alloyed to prevent the process of corrosion. E.g.

Stainless Steel.

(ii) Surface Coating : It involves application of a protective coating over the metal. It is of the following types,

(a) Galvanisation : It is the process of

coating zinc on iron sheets by using electric current .

(b) Electroplating : It is a method of coating one metal over another metal by passing electric current .

(c) Anodizing : It is an electrochemical process that converts the metal surface into a decorative , durable and corrosion resistant . Aluminium is widely used for anodizing process.

(d) Cathodic Protection : It is the method of controlling corrosion of a metal surface protected is coated with the metal which is easily corrodible . The easily corrodible metal is called Sacrificial metal to act as anode ensuring cathodic protection.

B.

C.

D.

Answer:



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Additional Questions Answers Choose The Correct Answer

1. Which of the following is the pair of shortest and longest periods in the modern periodic table ?

A. 1^{st} , 2^{nd}

B. 2^{nd} , 3^{rd}

C. 5th, 7th

D. 1st, 6th

Answer: B

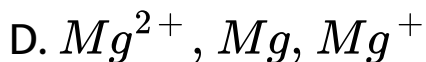
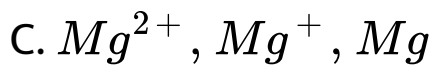


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2. Pick the correct order on decreasing trend of atomic size

A. Mg , Mg^+ , Mg^{2+}

B. Mg^+ , Mg^{2+} , Mg



Answer: A



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3. Among the halogens which one is most electro-negative ?

A. Iodine

B. Chlorine

C. Bromine

D. Fluorine

Answer: D



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4. The acid which makes iron passive is _____

A. Conc. HCl

B. Conc. H_2SO_4

C. Conc. HNO_3

D. Conc. HF

Answer: C



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5. The green layer found on the copper vessel is due to the formation of _____

A. basic copper carbonate

B. cupric oxide

C. cuprous oxide

D. copper chloride

Answer: A



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6. The number of neutrons in ${}_8O^{16}$ is _____

A. 8

B. 16

C. 32

D. 24

Answer: A



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7. Modern periodic law is based on _____

- A. atomic mass
- B. atomic number
- C. number of neutrons
- D. Both (a) and (b)

Answer: B



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8. The first period of the modern periodic table has _____ elements .

A. 1

B. 2

C. 3

D. 8

Answer: B



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9. The number of elements present in sixth period of modern periodic table is _____

A. 8

B. 18

C. 16

D. 32

Answer: D



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10. Pottassium belongs to _____ period .

A. First

B. Second

C. Third

D. Fourth

Answer: D



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11. Modern periodic table contains _____ groups.

A. 9

B. 32

C. 18

D. 64

Answer: C



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12. Noble gas belong to group _____

A. 14

B. 15

C. 17

D. 18

Answer: D



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13. Which among the following are periodic properties ?

A. Ionisation energy

B. atomic radius

C. electronegativity

D. all the above

Answer: D



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14. The distance from the centre of the nucleus to the outer most electron in an ion is termed as _____ radii.

A. atomic

B. Ionic

C. Covalent

D. both (b) and (c)

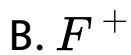
Answer: B



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15. When an electron adds on F atom, It becomes _____

A. F^{-}



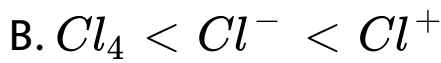
Answer: A



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16. Arrange the following in the increasing order of the size . Cl^- , Cl , Cl^+ .





Answer: C



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17. As the positive charge increase , the size of the cation _____

A. decreases

B. increases

C. remains constant

D. First increases and then decreases .

Answer: A



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18. Electronegativity values are based on

A. bond energy

B. electron affinity

C. ionisation energy

D. all the above

Answer: D



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19. Electronegativity values of Na and Cl are 0.9 and 3.0 respectively, predict the nature of bonding .

A. Ionic

B. Covalent

C. Coordinate

D. Metallic

Answer: A



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20. The process of extracting the ore from the earth's crust is _____ .

A. Metallurgy

B. Mining

C. Smelting

D. Leaching

Answer: B



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21. Slag is _____

A. Metal + Ore

B. Ore + Gangue

C. Flux + Gangue

D. Ore + Flux

Answer: C



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22. Metals are _____

A. Electro positive

B. Electronegative

C. both (a) and (b)

D. neither (a) nor (b)

Answer: A



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23. Which among the following are the ores of aluminium ?

(i) Bauxite (ii) Cryolite

(iii) Corundum .

A. Both (i) and (ii)

B. Only

C. Only (iii)

D. (i), (ii) and (iii)

Answer: D



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24. The process of extraction of aluminium from bauxite is called _____ process.

A. Hall's

B. Baeyer's

C. Smelting

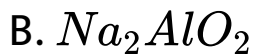
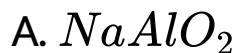
D. Calcination

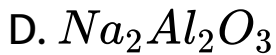
Answer: B



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25. The chemical formula of sodium meta aluminate is _____ .





Answer: A



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26. The chief ore of copper is _____

A. Copper pyrites

B. Copper glance

C. Cyprite

D. Rupy copper

Answer: A



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27. Blister copper contains _____

A. 50% pure copper

B. 99% pure copper and 1% impurities

C. 98% pure copper and 2% impurities

D. 75% pure copper and 25% impurities .

Answer: C



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28. The chemical symbol of Iron is _____

A. I

B. Ir

C. FE

D. Fe

Answer: D



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29. The carbon content in wrought iron is

A. 0.25 – 2 %

B. 0.25 – 17 %

C. 2 – 3.5 %

D. 3 – 4.5 %

Answer: A



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Additional Questions Answers Fill In The Blanks

1. The symbol of an element hassium is Uno, Its atomic number is _____



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2. According to Mendeleev's periodic table , the physical and chemical properties of elements are periodic function of their _____



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3. Horizontal rows in periodic table are called



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4. The shortest period in the modern periodic table is _____ period.



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5. Period 5 consist of _____ normal elements and _____ transition elements.



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6. Vertical columns in the periodic table are called _____



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7. Lanthanides and Actinides are called _____



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8. _____ of element explains periodic recurrence of physical and chemical properties .



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9. F,Cl, Br ,I and Ar are collectively known as _____.



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10. Oxygen family is also known as _____



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11. Atomic radius in metal atom is known as



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12. Atomic radii _____ down the group .



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13. When a neutral atom loses an electron, it forms a _____.



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14. The anion is _____ than its neutral atoms.



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15. Unit of ionization energy is _____



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16. Ionization energy _____ along the period and _____ down the group in periodic table .



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17. The scale used to determine electronegativity is called as _____ .



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18. _____ is the periodic property which is used to predict the nature of bonding between

atoms in a molecule.



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19. The process of reducing the roasted metallic oxide to metal is called _____



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20. The element with atomic number 13 is _____.



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21. Chemical formula of bauxite is _____



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22. _____ is silvery white metal.



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23. When aluminium is used as a reducing agent
, the process is called _____ process .



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24. The black oxide of copper is _____

A. CuO

B. Cu_2O

C. CuO_2

D. None

Answer: A



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25. Iron containing 2-4.5% of carbon is called



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26. _____ metal is alloyed with gold and silver for making coins and jewels.



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27. _____ is used for dental filling .



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28. Brass is an alloy of _____ and _____.



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29. _____ is the metal widely used for anodizing .



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30. Transition metals fall under groups _____ to _____.



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31. The distance between the centre of its nucleus and the outermost shell containing the valence electron is called _____ .



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32. Atomic radius, ionic radius, electron affinity are called _____ properties .



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33. The atomic radius of non-metallic elements is known as _____.



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34. Along the period , from left to right , the atomic radius of the elements _____



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35. Along the groups , from the top to bottom, the atomic radius _____.



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36. As the shell number increases, the distance between the valence shell and the nucleus _____.



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37. More and more positive charges impose a _____ over the electrons.



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38. _____ is also called ionisation enthalpy.



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39. Ions are formed when an atom _____
electrons.



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40. The size of a cation is always _____ than
its corresponding neutral atom.



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41. _____ and _____ lose the single electron from their outermost energy level to form cations.



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42. Fluorine and chlorine become negative ions by _____ .



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43. Ionic radii decreases along the _____.



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44. _____ is the minimum energy required to remove an electron from a gaseous atom in its ground state to form a cations.



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45. If the difference in electro negativity between two elements is less than 1.7, the bond

is considered to be _____.



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46. _____ show no tendency to accept electrons.



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47. The tendency to attract a shared pair of electrons towards itself in a covalent bond is called _____





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48. _____ is the science of extracting metals from ores and modifyig metals into alloys.



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49. The melting point of copper is _____.



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50. Copper reacts with dil. HNO_3 with the liberation of _____ gas.



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51. _____ is the process of purification of metal.



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52. Clay and bauxite are the two minerals to _____.



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53. The rocky impurity associated with an ore is called _____ or _____.



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54. Siderite is a _____ ore .



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55. Galena is a _____ ore .



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56. Zinc blende is a _____ ore .



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57. _____ process depends on the preferential wettability of the ore with oil and gangue particles.



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58. _____ ore is found in Coimbatore and Salem district.



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59. _____ is found in Madurai and Dindugal.



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60. The best conducting metal is _____.



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61. Matte is mixture of _____.



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62. 98% pure copper is called as _____.



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63. Electromagnets , springs and anchors are prepared from _____.



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64. _____ is the gradual destruction of metals by chemical or electrochemical reaction with the environment .



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65. The process of of coating zinc over a metal is called as _____.



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66. The easily corrodible metal is called as _____ to act as a anode ensuring cathodic protection.



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67. Corrosive action in the presence of moisture is called _____.



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68. Metals possess a high lustre called _____.



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69. _____ and _____ are metals which can be cut with a knife.



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 [View Text Solution](#)

70. Molecule of metals in their vapour state are usually _____.

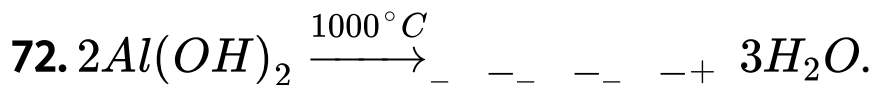


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71. On diluting sodium meta aluminate with water , a precipitate of _____ is formed .



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73. Aluminium is produced by the electrolytic reduction of fused _____ in the electrolytic cell.

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74. On heating at $800^\circ C$, aluminium forms _____ and _____

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75. _____ does not react with aluminium due to its layer of oxide on it.



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76. When steam is passed over red hot aluminium, _____ is produced.



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77. The density of aluminium is _____.



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78. The melting point of aluminium is _____.



[Watch Video Solution](#)

79. Aluminium reacts with caustic alkalis to form
_____.



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80. _____ acid does not attack aluminium.



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81. Copper pyrite , copper glance and cuprite are ores of _____.



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82. Copper pyrite yields nearly _____ % of the world production of copper .



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83. The chief ore of copper is _____.



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84. Blister copper contains _____ % of pure copper and _____ % of impurities .



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85. Blister copper is purified by _____



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86. When electric current is passed through the electrolytic solution, pure copper gets deposited at the _____.



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87. Haematite, magnetite and Iron pyrite are ores of _____.



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88. Chlorine reacts with copper , resulting in the formation of _____.



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89. _____ is used in electroplating .



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90. _____ is the second most abundant metal available in the Earth's crust next to aluminium .



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91. The number of periods in the modern periodic table is _____.



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92. The number of elements present in the longest period is _____.



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93. Both second and third period contain _____.



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94. The number of elements present in both fourth and fifth period is _____.



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95. Lanthanides are present in _____.



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96. Actinides are present in _____.



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97. Four elements recently discovered are placed
in the _____



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98. First group elements are called as _____.



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99. Second group elements are called as _____.



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100. The elements present in groups 3 to 12 are called as _____.



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101. Boron family elements are placed in group

_____.



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102. 14th group elements are called as

_____.



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103. Chalcogen means _____



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104. Halogens are placed in group _____.



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105. Halogens means _____.



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106. Noble gases are placed in group _____.



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107. The valency of alkali metals is _____.



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108. The valency of alkaline earth metal is

_____.



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109. The atoms of the 'group zero ' elements are unreactive because in their valence shell they have _____.



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110. The behaviour of repetition of a property after a regular interval is called as _____.



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111. As the positive charge increase , the size of cation _____



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112. As the negative charge increase, the size of anion _____.



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113. The nature of bonding between the atoms in a molecule can be predicted by _____.



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114. Metals which have less density than water are _____.



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115. Metals have _____ density .



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116. _____ is a metal which is non-conductor.



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117. _____ and _____ are non-malleable .



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118. _____ and _____ are two highly reactive metals.



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119. The second period contains _____ elements .



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120. The third period contains _____ elements .



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121. Group 1 is a _____.



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122. Atomic number of an element is equal to the number of _____ and _____.



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123. _____ and _____ properties of the elements are the periodic function of their _____ numbers.



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124. Element are arranged in the _____ order of their atomic number to the form modern periodic table.



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125. The _____ table is tabular arrangement of elements in rows and columns.



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126. The _____ period includes 8 normal elements 10 transition elements and 14 inner transition elements .



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127. Elements having identical valence shell electronic configuration , possess similar _____ properties .



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Additional Questions Answers Match The Following

1. 



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2. 



[View Text Solution](#)

3. 



[View Text Solution](#)



View Text Solution

4. 



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5. 



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6. 



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7. 

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8. 

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10. 



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11. 



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12. 



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Additional Questions Answers State Whether True Or False Correct The False Statement

1. The element with atomic number 54 belongs to period 5 of the periodic table.



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2. Electron affinity is not a periodic property .



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3. If the electronegativity difference between two elements is less than 1.7 the bond is 50% ionic and 50% covalent.



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4. Oxide ore are concentrated by gravity separation method.



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5. All metals are solids are room temperature .



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6. Roasting is the process in which the ore is heated in the presence of excess air.



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7. Aluminium is very good oxidising agent



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Additional Questions Answers Assertion And Reason

1. Assertion : $I. E_1 > I. E_2 > I. E_3$.

Reason : Increase in nuclear charge shows strong force of attraction.

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: A



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2. Assertion : Noble gases have zero electron affinity .

Reason : Noble gases have completely filled electronic configuration .

- A. Both Assertion and Reason are true and Reason is correct explanation of Assertion.
- B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- C. Assertion is true but Reason is false.
- D. Assertion is false but reason is true.

Answer: A



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3. Assertion : Copper pyrite is concentrated by froth flotation.

Reason : Copper pyrite is an oxide ore.

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: C



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4. Assertion : Al is very good reducing agent.

Reason : It is used in Alumino thermic process .

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: B



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5. Assertion : Copper is extensively used in manufacture of electric cables

Reason : Copper is a very poor conductor of heat and electricity .

- A. Both Assertion and Reason are true and Reason is correct explanation of Assertion.
- B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- C. Assertion is true but Reason is false.
- D. Assertion is false but reason is true.

Answer: C



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6. Assertion : Ionization energy increase does the group.

Reason : Atomic size increases down the group.

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: D



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7. Assertion : A greenish layer appears on copper vessels, if left uncleaned.

Reason : It is due to the formation of layer of basic copper carbonate .

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: A



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8. Assertion : In thermite welding , aluminium powder and Fe_2O_3 are used

Reason : Aluminium powder is a strong reducing agent .

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false but reason is true.

Answer: A



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Additional Questions Answers Analogy Type Question

1. Metals of high reactivity : Electrolytic reduction , refining :: Metals of low reactivity :



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2. First group : Alkali metals :: Second group :



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3. Blood pigment : Fe :: Bone, Teeth : -----



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4. Aluminium : Bauxite :: Copper : -----



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5. Aluminium : $660^{\circ}C$:: Copper : _____



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6. Metal atom : Metallic radius :: Non-metallic element : _____



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7. Cations : +ve charge :: Anion : _____



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8. Oxide ores : Bauxite :: Carbonate ores :



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9. Household utensils : Aluminium : Electric
Cables : -----



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10. Mercury : Amalgam :: Duralumin : _____



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11. Mendeleev's periodic table : Atomic mass ::

Moseley modern table : _____



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12. Periods : Horizontal rows :: Groups : _____



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13. First period : Shortest Period :: Sixth period

: _____



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14. Group 17 : halogens :: Group 18 : _____



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15. Fe_2O_3 , Fe_3O_4 , FeS_2 , Cu_2O



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16. $ZnCO_3$, $Al_2O_3 \cdot 2H_2O$, $CaCO_3$, $FeCO_3$.



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17. He , H , Ne , Ar



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18. Titanium , Chromium, Gold , Manganese .



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Additional Questions Answers To Find The Odd One Out

1. Cu_2O , Cu_2S , Al_2O_3 , $CuFeS_2$



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Additional Questions Answers Answer In A Word Or Sentence

1. The rocky impurities associated with the ore.





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2. The process of reducing the roasted oxide ore to metal under molten condition.



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3. Corrosion can be prevented by many ways.

Name the metal which is used for galvanization.



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4. Corrosion can be prevented by many ways.

What is the used of coating with paints ?



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Additional Questions Answers Answer In A Word

1. What is the percentage of gold present in ' Hall mark ' gold ?



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2. What is the meaning of ' Chalcogens ?



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3. What are the metals used in manufacture of science equipment ?



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4. Name the metal present in chlorophyll which is used in photosynthesis.



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5. When iron is exposed to moist air, a reddish brown substance is deposited on it. What is it ?
Give its composition.



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6. What is the melting point of aluminium ?



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1. Define Modern periodic table .



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2. Define periodicity.



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3. Why are elements of group 18 unreactive ?



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4. What is the significance of modern periodic table ?

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5. Name the periodic properties and why are they called so ?

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6. Define atomic radius.

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7. Define metallic radius.



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8. Define covalent radius .



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9. The value of $d(\text{C-C})$ distance is experimentally found to be 1.54\AA . Find its covalent radius .





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10. What do you infer from this figure ?



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11. Explain the variation of atomic radius (i)
across the period (ii) along the group



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12. Why do atomic radii increase down the group ?



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13. Arrange the following element in the increasing order of atomic size . Rb , Li , K, Na .



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14. Among the following pairs , pick out the smallest .

(i) Mg, Ca (ii) Al, Si (iii) Cl, Br .



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15. Atomic radii decreases as we move from left to right of periodic table. Justify your answer .



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16. Say whether the following diagrammatic representation in true or false . Give reason.



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17. Define the term Ionic Radii.



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18. Define ionisation energy or Ionisation enthalpy .



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19. Define electron affinity .



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20. "Noble gases have zero electron affinity " .

Say True and False and Justify your answer .



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21. Ionisation energy decreases down the group in periodic table. Give reason .



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22. Define electronegativity .



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23. Define metallurgy .



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24. What is Gangue ?



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25. What is flux ? Give example.



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26. Give the principle behind hydraulic washing .



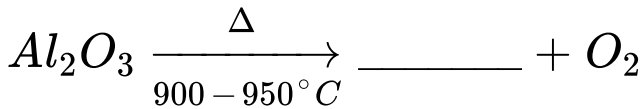
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27. What is meant by ductility ?



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28. Complete the following reaction .



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29. In Hall's process of electrolytic reduction of alumina . Name the Cathode .



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30. In Hall's process of electrolytic reduction of alumina . Name the Anode .



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31. In Hall's process of electrolytic reduction of alumina . Name the electrolyte .



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32. What happen with aluminium is heated to $800^{\circ}C$?



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33. What happens when aluminium is treated with dilute sulphuric acid ?



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34. Give any three uses of aluminium.



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35. Name the important ores of Copper .



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36. What is the cathode , anode and electrolyte used in the electrolytic refining of copper ?



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37. What is anode mud ?



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38. Copper vessels gets covered with a green layer . Explain .



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39. Explain the action of dil. HNO_3 with copper

.



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40. Write the ores of Iron with its chemical formula.



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41. Name the process . Ore heated in the absence of air .



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42. Name the process . Ore heated in the presence of excess of air .



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43. Explain the action of heat on Iron .



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44. Write the uses of Pig iron .



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45. Iron when dipped in conc. HNO_3 becomes chemically inert . Give reason .



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46. Write any three uses of copper.



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47. What is Cast iron ?



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48. What is an alloy ?



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49. What is an amalgam ?





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50. How are alloys made ?



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51. What is Duralumin ? Give its uses .



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52. Name any two alloys of copper and Give its uses .



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53. Write the uses of nickel steel.



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54. Define corrosion .



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55. What is galvanization ?





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56. Explain the classification of alloys based on iron content .



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57. What is electroplating ?



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58. What is Sacrificial metal ?



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Additional Questions Answers Short Answers

1. Give appropriate reasons for alloying.



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2. Answer one word

What is Slag ?



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3. Answer one word

Give an example of an basic flux .



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4. Answer one word

How is Haematite ore concentrated ?



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5. Answer one word

Give an example of an ore concentrated by froth flotation .



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6. Answer one word

What is Gangue ?



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7. Answer one word

Name the ore of aluminium .



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8. Explain the action of heat on copper .



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9. Explain the combustion zone in the extraction of iron from its ore ? Write the chemical reaction occurring in that zone .



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10. Explain Bessemerisation.



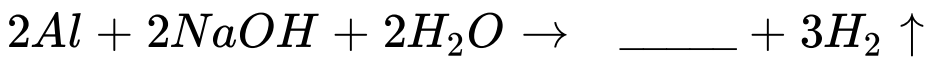
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11. Complete the reaction



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12. Complete the reaction



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13. Complete the reaction



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14. Write down the steps involved in a metallurgical process.



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15. Distinguish between cation and an anion .



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16. Distinguish ore from a minerals .



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17. Relate all the four columns of the table with unique properties .



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Additional Questions Answers Long Answers

1. Explain the salient features of periods in the modern periodic table.



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2. Explain the salient features of periods in the modern periodic table.



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3. How will you predict the nature of chemical bonds using electronegativity values?



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4. Explain hydraulic washing with a neat diagram.



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5. How are magnetic ores separated from non magnetic impurities ? Explain .



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6. How is zinc blende concentrated ? Explain it with a neat diagram .



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7. How is Bauxite are concentrated ?



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8. Explain the types of corrosion .



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9. What are the methods preventing corrosion ?



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10. Redraw and label the diagram . Then answer the following question .



A- Steel shell

B- Graphite rods - anode

C- Electrolyte

D- Graphite lining - cathode iron tank

What process does the diagram represent ?



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11. Redraw and label the diagram . Then answer the following question .



A- Steel shell

B- Graphite rods - anode

C- Electrolyte

D- Graphite lining - cathode iron tank

Why does the graphite rod need to be replaced often ?



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12. Redraw and label the diagram . Then answer the following question .



A- Steel shell

B- Graphite rods - anode

C- Electrolyte

D- Graphite lining - cathode iron tank

Given reason for the melting point of the electrolyte .



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13. Redraw and label the diagram . Then answer the following question .



A- Steel shell

B- Graphite rods - anode

C- Electrolyte

D- Graphite lining - cathode iron tank

Write the overall equation of this process



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1. Atom of seven elements A, B, C, D, E, F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance while the oxides of the remaining six elements are basic in nature. Based on the above information, answer the following question given ahead :

What could the element A be ?



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2. Atom of seven elements A, B, C, D, E, F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance while the oxides of the remaining six elements are basic in nature. Based on the above information, answer the following question given

ahead :

Will element A to G belong to the same period or same group of the periodic table ?



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3. Atom of seven elements A, B, C, D, E, F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance

while the oxides of the remaining six elements are basic in nature . Based on the above information, answer the following question given ahead :

Write the formula of the compound formed by the reaction of the element A with oxygen .



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4. Atom of seven elements A,B ,C, D, E,F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine

with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance while the oxides of the remaining six elements are basic in nature . Based on the above information, answer the following question given ahead :

Show the formation of the compound by a combination of element C with chlorine with the help of electronic structure .



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5. Atom of seven elements A, B, C, D, E, F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance while the oxides of the remaining six elements are basic in nature. Based on the above information, answer the following question given ahead :

What would be the ratio of number of

combining atoms in a compound formed by the combination element A with carbon ?



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6. Atom of seven elements A, B, C, D, E, F and G have a different number of electronic shells but have the same number of electrons in their outermost shells. The element A and C combine with chlorine to form an acid and common salt respectively. The oxide of element A is liquid at room temperature and is a neutral substance while the oxides of the remaining six elements

are basic in nature . Based on the above information, answer the following question given ahead :

Which one of the given elements is likely to have the smallest atomic radius ?.



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7. The following table shows the position of six elements A,B,C,D,E and F in the period table.



Using the above table answer the following question :

Which element will form only covalent compounds ?



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8. The following table shows the position of six elements A,B,C,D,E and F in the period table.



Using the above table answer the following question :

Which element is a metal with valency 2 ?



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9. The following table shows the position of six elements A,B,C,D,E and F in the period table.



Using the above table answer the following question :

Which element is a non-metal with valency of 3 ?



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10. The following table shows the position of six elements A,B,C,D,E and F in the period table.



Using the above table answer the following question :

Out of D and E, which one has more atomic radius and why ?



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11. The following table shows the position of six elements A,B,C,D,E and F in the period table.



Using the above table answer the following question :

Write a common name for the family of element C and F .



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