



NOBLE GASES

1. Oxygen and Xenon have similar

a. Atomic size
energy

b. Ionization

c. Electron affinity

d. Electronegativity



2. Which of the following is least soluble in water ?

a. Neon

b. Argon

c. Krypton

d. Xenon

Vikasana - CET 2012



3. The least abundant noble gas in the atmosphere is

- a. Ne b. Kr c. Xe d. Rn



4. Liquid Helium has a high

a. Density

b. viscosity

c. surface tension

d. conductivity

Vikasana - CET 2012



5. Helium is obtained mainly from

- a. Pitch blende
- b. Air
- c. Natural gas
- d. None of these



6. The noble gas which is the least polarised

- a. Rn b. Xe c. Ne d. He



7. The forces acting between noble gas atoms are
- a. Ionic forces b. Covalent forces
 - c. Dipole-dipole interactions
 - d. van der Waal's forces



8. The lowest boiling point of Helium is due to its
- a. Gaseous nature
 - b. Inertness
 - c. High conductivity
 - d. Weak van der Waal's forces



9. The noble gas which is used in airships is

a. Ne

b. Kr

c. Xe

d. He

Vikasana - CET 2012



10. Neon sign lamps produce

- a. Blue colour
- b. Red colour
- c. Green colour
- d. Yellow colour



11. Welding of metals can be conducted in the atmosphere of

- a. He b. Ne c. Ar d. All of these



12. The noble gas which does not form any compound is

- a. Rn b. Kr c. Ar d. He



13. Noble gases form complexes with





14. Noble gas heavier than air is

a. He

b. Ne

c. Ar

d. none of these



15. The noble gas which forms interstitial compounds with metals is

a. Xe

b. Kr

c. Ne

d. He

Vikasana - CET 2012



16. Which noble gas is used in very low temperature thermometer ?

- a. He b. Ne c. Ar d. Kr



17. Helium is mixed with oxygen for artificial breathing because

- a. It is lighter than nitrogen
- b. It is non-inflammable
- c. It is less soluble in blood
- d. It is more conducting than nitrogen



18. Which noble gas is used in safety devices to protect electrical instruments ?

- a. He b. Ne c. Ar d. Xe

.



19. Helium is used in nuclear reactors as a

- a. Projectile
- b. As a neutron absorber
- c. As a coolant
- d. As a light element



20. The adsorption of noble gases on activated charcoal increases with

- a. Increase of temperature
- b. Decrease of atomic mass
- c. Decrease of pressure
- d. Decrease of temperature



21. During the adsorption of Krypton on activated charcoal at low temperature,

- a. $\Delta H < 0$ $\Delta S < 0$ b. $\Delta H > 0$ $\Delta S < 0$ c. $\Delta H < 0$ $\Delta S > 0$
d. $\Delta H > 0$ $\Delta S > 0$



22. The liquid having a flat meniscus is

a. He

b. Ne

c. Ar

d. N₂

Vikasana - CET 2012



d Block elements

23. Which of the following has green colour





24. Which of the following oxides of Chromium is amphoteric

- a. CrO_3 b. CrO_2 c. CrO d. Cr_2O_3



25. Silver does not dissolve in

- a. $\text{dil.H}_2\text{SO}_4$ b. dil.HNO_3 c. $\text{Conc. H}_2\text{SO}_4$
d. Conc.HNO_3



26. Which of the following oxides of Manganese is amphoteric ?

- a. MnO_2 b. Mn_2O_3 c. Mn_2O_7 d. MnO



27. Which is the best conductor of electricity

- a. Fe b. Al c. Cu d. Ag



28. Which element will be repelled by the magnetic field

- a. Cobalt b. Silver c. Copper d. Mercury



29. Which of the following forms a colourless solution in aqueous medium ?

- a. Ti^{3+} b. Sc^{3+} c. V^{3+} d. Cr^{3+}



30. d block metal ions form complex compounds because

- a. They have low polarising power
- b. They have few valence electrons
- c. They have smaller size and higher charge
- d. They have completely filled d-orbitals



31. Ferric chloride solution is prepared in the laboratory in the acid medium because the acid
- a. Increases the reactivity of ferric chloride
 - b. Prevents hydrolysis of ferric chloride
 - c. Increases the solubility of ferric chloride
 - d. Renders it stable to light



32. Cuprous and cupric oxides find use in the manufacture of

- a. Paints
- b. medicinal preparations
- c. Special steels
- d. coloured glasses



33. Which of the following nitrates on strong heating leaves the metal as a residue ?





34. Which is wrongly matched ?

- a. German Silver – Cu, Zn, Ni
- b. Alnico – Fe, Al, Ni, Co
- c. Monel metal – Cu, Zn, Sn
- d. Duralumin – Al, Cu, Mn , Mg



35. Cuprous ion is colourless while cupric ion is coloured because

- a. Cu^+ ion has a complete d-orbital and Cu^{2+} has incomplete d-orbital
- b. Both have unpaired electrons in d-orbital
- c. Cu^+ has incomplete d-orbital and Cu^{2+} ion has complete d-orbitals
- d. Both have half filled orbitals



36. Which of the following alloys is used for making magnets for hearing aids ?

- a. Alnico
- b. Monel metal
- c. German Silver
- d. Invar



37. Iron loses magnetic property at

- a. Melting point
- b. Curie point
- c. Boiling point
- d. 1000 K



38. Which metal is used to make alloy steel for armour plates, safes and helmets ?

- a. Cr b. Al c. Pb d. Mn



39. Stainless steel does not rust because
- Iron forms a hard chemical compound with chromium
 - Chromium and nickel combine with iron
 - Chromium forms oxide layer and protects iron from rusting
 - Nickel present in it does not rust



40. Which of the following pairs cannot form an alloy ?
a. Fe, C b. Zn, Cu c. Na, Hg d. Fe, Hg



41. Which one of the following is an amphoteric oxide ?

- a. ZnO b. Na₂O c. SO₂ d. B₂O₃



42. Of the following outer electronic configurations of atoms, the highest oxidation state is achieved by which one of them ?





43. The oxidation state of chromium in the final product formed by the reaction between KI and acidified potassium dichromate solution is

- a. +4 b. +6 c. +2 d. +3



44. Ammonium dichromate is used in some fire works.
The green coloured compound formed is





45. The pair of compounds in which both the metals are in the highest possible oxidation state is

- a. $[\text{Fe}(\text{CN})_6]^{3-}$, $[\text{Co}(\text{CN})_6]^{3-}$
- b. CrO_2Cl_2 , MnO_4^-
- c. TiO_3 , MnO_2
- d. $[\text{Co}(\text{CN})_6]^{3-}$, MnO_3