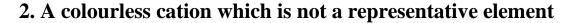
ANALYTICAL CHEMISTRY MCQs

1. A colourless colourless	s metallic oxide which dissolves in alkalis to yield itions
a) Na(
b) K ₂ ()
<i>p</i>) Pb(
d) Pb (O_2



- a) Au³⁺
- b) Pt 4+
- c) Sn⁴⁺
- NH4+

3. Name the colourless solution formed when zinc hydroxide reacts with ammonium hydroxide

- a) Tetramine copper hydroxide
- Tetramine zinc hydroxide
- c) Ammonium zincate
- d) Sodium zincate

- 4. Identify the hydroxide soluble in NaOH solution
 - a) Calcium hydroxide
 - b) Copper hydroxide
 - c) Ferric hydroxide
 - **Zinc hydroxide**

5.One of the products obtained when lead nitrate solution reacts with sodium hydroxide is lead hydroxide. The other product will be

- a) Sodium nitrite
- b) Sodium oxide
- c) Sodium plumbite
- d) Sodium nitrate
- 6. A metal oxide which produces salt and water on reaction with alkali as well as with acid is
 - z/ ZnO
 - b) FeO
 - c) MgO
 - d) CuO
- 7. Identify the cation in the following case:

Sodium hydroxide when added to solution 'A' gives reddish brown precipitate.

- 2) Fe³⁺
- b) Fe²⁺
- c) Pb²⁺
- d) Ca²⁺

8. Aluminium reacts with fused sodium hydroxide to produce____ a) Sodium meta-aluminate b) Potassium meta-aluminate **Sodium** aluminate d) Sodium zincate 9. The precipitate of which of the following ions dissolves in excess NH4OH solution to give an inky blue solution. a) Fe²⁺ b) Fe³⁺ c) Cu²⁺ d) Zn²⁺ 10. Which of the following anion is colourless? a) MnO₄

11. State the ion of the salt which is soluble in excess of NaOH but insoluble in

b) Cr₂O₇

d) CrO₄²-

excess of NH₄OH.

a) Ca²⁺

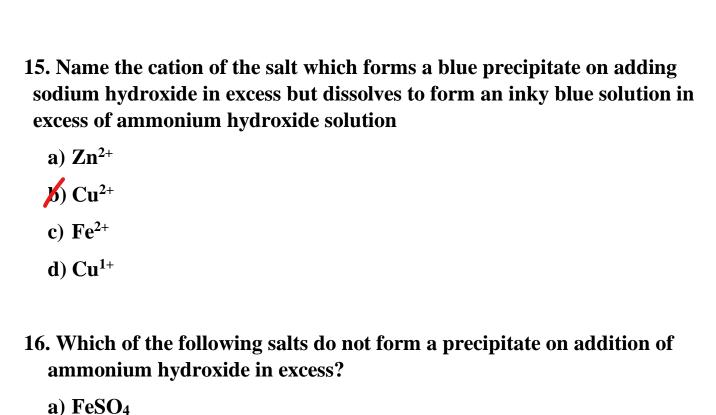
b) Mg²⁺

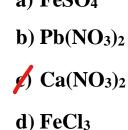
c) Pb²⁺

d) Cu²⁺

So4²-

- 12.State the observation when ammonium hydroxide is added to ferric chloride
 - Reddish brown ppt. formed which is insoluble in excess ammonium hydroxide
 - b) Reddish brown ppt. formed which is soluble excess of ammonium hydroxide.
 - c) Dirty green precipitate formed which is insoluble in excess of ammonium hydroxide
 - d) Dirty green precipitate formed which is soluble in excess of ammonium hydroxide
- 13. The precipitate formed when calcium nitrate reacts with NaOH solution
 - 2) Calcium hydroxide
 - b) Calcium sulphate
 - c) Calcium oxide
 - d) Calcium chloride
- 14. The salts formed when zinc sulphate reacts with sodium hydroxide
 - a) Zinc carbonate and zinc hydroxide
 - b) Zinc oxide and zinc hydroxide
 - c) Zinc oxide and sodium zincate
 - Zinc hydroxide and sodium sulphate





- 17. What is the colour of cupric ion?
 - a) Pink

b) Blue

- c) Reddish brown
- d) Dirty green

18. What is the condition of the alkali in the given equation?

$$Zn + 2NaOH \rightarrow Na_2ZnO_2 + H_2\uparrow$$

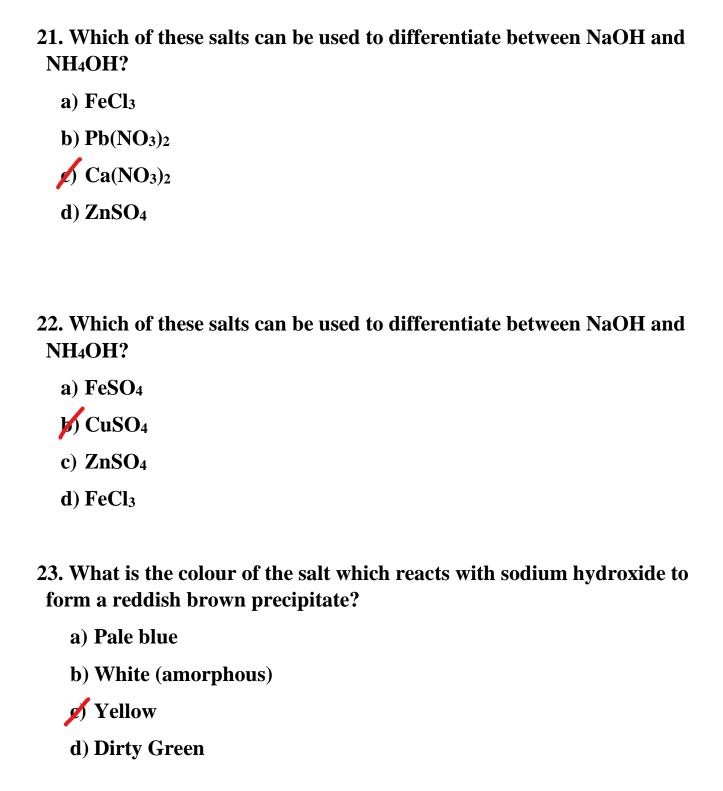
- a) Boiling
- b) Hot and dilute
- c) Cold and dilute
- Hot and concentrated

19. Hydroxide of this metal is soluble in sodium hydroxide solution

- a) Magnesium
- **Lead**
- c) Silver
- d) Copper

20. Cupric hydroxide is a

- a) Blue solution
- b) Bluish white ppt.
- c) White ppt.
- 💋 Pale blue ppt.



24. What is the hydroxide formed when a chalky white precipitate reacts with ammonium hydroxide?
a) $[Cu(NH_3)_4](OH)_2$
b) $[\mathbf{Zn}(\mathbf{NH}_3)_4](\mathbf{OH})_2$
No reaction takes place
d) $Zn(OH)_2$
25. Which ion of a salt gives a reddish brown ppt. when it reacts with an alkali?
a) $\mathbf{Z}\mathbf{n}^{2+}$
b Fe ³⁺
Fe ³⁺ c) Fe ²⁺
$\mathbf{d)}\ \mathbf{Mg^{2+}}$
26. What is the colour of permanganate ion?
a) Blue
b) Red
2 Pink
d) Orange
27. When NaOH solution is added dropwise to Ferrous Sulphate, a coloured precipitate is formed.
a) Reddish brown
b) Pale blue
Pale green
d) Chalky white

28. When excess of NH_4OH solution is added to copper(II) hydroxide complex salt is formed -
a) Tetraamine zinc chloride
b) No salt is formed, the precipitate remains insoluble
c) Sodium argentocyanide
d') Tetraamine copper hydroxide
29. When NaOH solution is added to zinc nitrate solution -
a) Chalky white ppt is formed
Gelatinous white ppt is formed
c) Dirty green ppt is formed
d) Reddish brown ppt is formed
30. The metal ion which can produce a coloured ion -
a) Ferric
b) Lead

31. The salts of which type of elements are generally coloured:

c) Zinc

d) Calcium

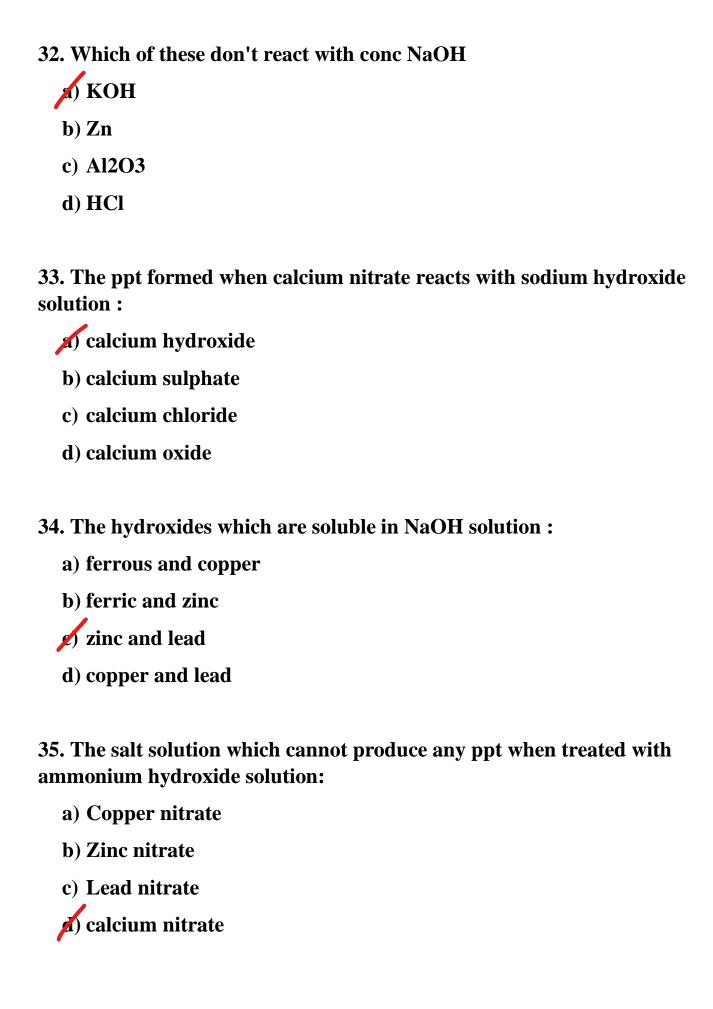
a) Halogens

b) Alkali metals

Transition elements

d) Representative elements

a



- 36. The compound formed when zinc hydroxide reacts with excess ammonium hydroxide:
 - a) Ammonium carbonate
 - b) Zinc oxide
 - Tetraammine zinc (ii) hydroxide
 - d) Sodium zincate
- 37. What happens when FeSO4 and Fe2(SO4)3 react with NaOH
 - a) FeSO4 forms an insoluble green ppt whereas Fe2(SO4)3 dissolves in the solution.
 - b) Both dissolve in the solution, making the solution colourless.
 - c) Both dissolve in the solution, making the solution green and red respectively.
 - A) Both form ppts, FeSO4 forming a dirty green one and Fe2(SO4)3 forming a reddish brown one.
- 38. Insoluble sulphate which is soluble in excess of NaOH solution :
 - a) Calcium Sulphate
 - b) Lead(II) Sulphate
 - c) Barium Sulphate
 - **Zinc Sulphate**

- 39. Which salt forms an inky blue solution on reacting with excess of ammonium hydroxide
 - a) Magnesium Sulphate
 - **b** Copper Nitrate
 - c) Lead Nitrate
 - d) Iron(III) Chloride
- 40. The salt which in solution gives a pale green precipitate with NaOH solution and a white ppt with BaCl2 solution is :
 - a) Iron(III) Sulphate
 - Iron (II) Sulphate
 - c) Iron(III) Chloride
 - d) Iron(II) Chloride
- 41. Ammonia hydroxide solution is added dropwise to solution of metallic salts what is formed
 - a) Another salt
 - b) Nitrate
 - Precipitate of thier hydroxide
 - d) Metals
- 42. What exhibits dual characteristics of acidic and basic
 - a) All Metallic oxides and hydroxide
 - b) All Alkali
 - c) All Metals and non metals
 - **M** All Amphoteric metals

- 43. Which of these react with NH4OH and form a soluble salt
 - a) FeSO4
 - b) FeCl3
 - c) Pb(NO3)2
 - ZnSO4
- 44. What is formed when zinc oxide reacts with Sodium Hydroxide
 - **3** sodium zincate
 - b) zinc hydroxide
 - c) zinc [II] hydroxide
 - d) potassium zincate
- 45. When Ammonium hydroxide is added to copper sulphate solution
 - a) Pale Blue Ppt is formed which is insoluble in excess ammonium hydroxide solution.
 - **b**) Pale blue Ppt formed which turns into Inky blue solution.
 - c) Reddish brown Ppt is formed which turns into blue solution.
 - d) Dirty green Ppt is formed which turns into blue solution.

- 46. The salt solution which cannot produce any Ppt when treated with ammonium hydroxide solution.
 - a) Copper nitrate
 - b) Zinc nitrate
 - c) Lead Nitrate
 - **d**) Calcium nitrate
- 47. The colour of copper salt's precipitate in excess of alkali is
 - A- milky white ppt
 - B- reddish brown ppt
 - **%** pale blue ppt
 - D- dirty green ppt
- 48. Salt formed when aluminium reacts with NaOH and water
 - **X- 2NaAlO2**
 - **B-NaAlO2**
 - C-Al2NaO
 - D-2NaOH
- 49. Name a salt which will not react with NH₄OH solution
 - a) ZnCl₂
 - b) CuCl₂
 - NH₄Cl
 - d) FeCl₂

50. Name a substance which reacts with hot conc. NaOH solution and undergoes neutralization reaction

- a) Al₂O₃
- b) Al
- c/Al(OH)3
- d) AlO